

AMERICAN SEEDING-MACHINE CO. ALMANAC



PUBLISHED BY

AMERICAN SEEDING-MACHINE CO.
SPRINGFIELD, OHIO. U.S.A.

SUPERIOR SINGLE DISC Drill

(See Illustration on Opposite Page.)

NEVER CHOKES IN TRASH.

WE MAKE DOUBLE DISC DRILLS ALSO.

BOTH Single and Double Disc Drills furnished Plain Grain, or Combined Grain and Fertilizer, in all sizes.

The Superior Disc Drill successfully seeds the entire field and plants the seed at a uniform depth in a properly made seed trench. It covers all the grain. No grain on the surface or mixed with the earth. It will not choke or drag a particle of trash. The Superior Grain Drill makes grain raising profitable. Saves time, because one man or boy can operate it under all conditions of seeding.

Broad Tire Wood or Steel Wheels.

Both Wheels Drivers.

Solid Steel Frame.

Rear Lift.

Tubular Pressure Rods.

Perfect Balance.

Light Draft.

Perfect Double-Tree Hitch.

Steel Bed Rail.

Detachable Grass Seeder.

Draw Bars of High Carbon Steel.

Each Disc and Drag Bar Independent.

Direct Spring Pressure.

Disk Wheel for changing quantity without change of parts.

Pull Rods to shut off Feeds without raising Discs from ground.

Made by Superior Division,

AMERICAN SEEDING-MACHINE CO.,

Springfield, Ohio.

Farmers' Favorite Plain Hoe Drill

(See Illustration on Opposite Page.)

Fertilizer Hoe Drills furnished if wanted.

MADE IN ALL STANDARD SIZES.

“QUALITY,” not “cheapness,” has always been our motto. The Farmers' Favorite Drills are made to wear, to sow accurately, to satisfy the most particular farmers, and prove a credit to the makers. They never disappoint.

Sows all kinds of grain—Wheat, Oats, Barley, Rye, Flax, Millet, Beets, Buckwheat, Peas, Beans, Corn and Grass Seed.

New Balanced Angle Steel Frame.

Spring or Pin-Break Hoes.

Extension Chilled Hubs.

Improved Box and Roller Bearings.

“Perfection” Grass Seeder.

Double Force Feed Grain Distributors.

Instantaneous Change of Quantity Device.

Steel Frame, amply Reinforced.

Light Draft.

No Neckweight.

Made by Bickford & Huffman Division,

AMERICAN SEEDING-MACHINE CO.,

Springfield, Ohio.

Superior

DISC DRILLS

Never Choke in Trash.



(See description on opposite page.)

Farmers' Favorite

Hoe Drill



(See description on opposite page.)

OUR ALMANAC FOR 1905.

YES, it is our intention to get out an Almanac for 1905, if our friends desire it.

If you want the American Seeding-Machine Company Almanac for 1905, write and ask for it; we will be glad to send you one.

In our 1904 Almanac will be found many useful record tables, which will enable the farmer to keep an accurate record of all his sales, etc. If these are used, the references from year to year will be of great benefit.

If you are in need of a seeding machine of any kind, always insist on seeing those of our manufacture before you buy. We make machines that will do *your* work and that were designed especially for *your* locality.

AMERICAN SEEDING-MACHINE CO.
SPRINGFIELD, OHIO.

Eclipses for 1904.

In the year 1904 there will be two eclipses, both of the sun.

I. An annular eclipse of the sun March 16th, invisible here; visible to southern Asia, eastern Africa and a number of islands in the East Indies.

II. A total eclipse of the sun September 9th, not visible here; visible to an immense portion of the Pacific Ocean on both sides of the Equator.

The Seasons for 1904.

Vernal Equinox (spring begins)....	March....	20d.	7h.	58m.	P. M.
Summer Solstice (summer begins)...	June.....	21d.	3h.	51m.	P. M.
Autumnal Equinox (autumn begins).	September	23d.	6h.	40m.	A. M.
Winter Solstice (winter begins).....	December.	22d.	1h.	14m.	A. M.



Morning and Evening Stars for 1904.

The planet Venus (♀) begins as morning star and continues as such until July 8th, after which date she will be evening star to end of the year.

The planet Mars (♂) will be evening star until May 30th, and then morning star the rest of the year.

The planet Jupiter (♃) is evening star until March 27th, then morning star until October 13th, and then evening star the balance of the year.

The planet Saturn (♄) will be evening star until February 1st, then morning star until August 10th, and then evening star the balance of the year.

Chronological Eras.

The year 1904 comprises the latter part of the 128th, and the beginning of the 129th year of American Independence and corresponds to—

The year 6617 of the Julian Period.

The year 5664-5665 of the Jewish Era; the year 5665 begins at sunset on September 9th.

The year 2657 since the foundation of Rome, according to Varro.

The year 2564 of the Japanese Era, and to the 37th year of the period entitled "Meiji."

The year 1322 of the Mohammedan Era, or the Era of the Hegira, begins on the 18th day of March, 1904.



WEATHER FORECASTS FOR 1904



JANUARY 1st to 3rd—Storm Wave.—Very stormy weather from Texas to the Dakotas. Falling temperature over Central States, the Lake region and New England. Heavy snow and ice north; rain and sleet south.

4th to 7th—Mild Period.—Soft, slushy conditions in lower Mississippi and Ohio river valleys. Pleasant, sunshiny weather in Southern and Middle Atlantic States. Temperature 76° at Jacksonville, 75° at Mobile, 72° at Atlanta and 65° at Lynchburg.

8th to 11th—Storm Period.—Dangerous gales over Lake region, Middle Atlantic States and New England. Excessive rainfall in Arkansas, Mississippi and Kentucky. Floods in Tennessee river valley.

12th to 15th—Warm Wave.—Generally fair weather with frosty nights in western and southwestern sections. Soft, damp weather over Central, Southern and Middle Atlantic States.

16th to 20th—Rain Period.—Rain, sleet and snow at all points over the Lake region, Southwestern and Central States. General snow blockades in New York and New England. Cloudy, foggy and threatening conditions over Gulf and South Atlantic States.

21st to 23rd—Storm Wave.—Dangerous gales on Gulf Coast and along the entire Atlantic Seaboard. Loss of life and shipping on the Great Lakes. Drifts and blockades in Rocky Mountain region and in the northwest. Excessive rainfall along the north Pacific coast.

24th to 27th—Unsettled Period.—Blustery, squally weather in the Northwestern and Central States. Freezing weather at extreme Southern points. Damp, cold weather in Middle Atlantic and New England States.

28th to 31st—Cold Wave.—Low temperature at all points in the Northwest and upper Mississippi Valley States. Cold weather reaching near the Gulf Coast and Florida. Temperature 32° below zero at Helena, 30°

below at Bismark, 24° at Omaha, 16° below at Chicago, at zero at Cincinnati, 10° above at Atlanta and 24° above at Jacksonville.

The January temperature will be generally above normal except in the Northwest, where it will be below the average. The rainfall will be excessive over the Southern States, west of, the Appalachian plateau, and the Pacific slope. It will be deficient elsewhere.

FEBRUARY 1st to 2nd—Mild Period.—Bright, clear weather in the Gulf and South Atlantic States. Sharp frosts at all points west of the Mississippi river. Cold weather over Rocky Mountain region and Northwest.

3rd to 6th—Storm Wave.—Heavy gales over Northwest and Lake region. Stormy conditions over north Atlantic seaboard. Cloudy, rainy weather in Kentucky, Tennessee and the Carolinas. General rains in Oregon and Washington.

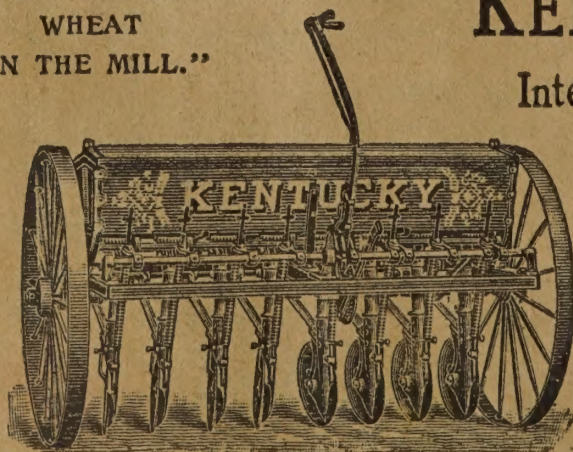
7th to 10th—Warm Wave.—Soft, balmy winds from the southwest. Mild, genial weather at all points south of the 40th parallel. General thaw-out over the Middle West, the Ohio River Valley and the Virginias. Temperature 80° at San Antonio, 75° at Little Rock, 68° at Natchez and 65° at Nashville.

11th to 15th—Rain Period.—Rain and sleet general over the Missouri and Upper Mississippi river valleys. Blustery, squally weather over Lake region and New England. Cloudy, damp weather over Gulf and South Atlantic States.

16th to 18th—Cold Wave.—Sharp, crisp cold weather throughout the Middle West and Northwest. Abrupt fall of temperature over Kansas, Oklahoma, Texas and New Mexico. Cloudy, disagreeable weather over Kentucky, Tennessee, Georgia and the Carolinas.

19th to 22nd—Cloudy Period.—Foggy, cloudy and rainy weather accompanied with local thunder showers throughout the South-

"AS GOOD AS
WHEAT
IN THE MILL."



KENTUCKY DRILLS

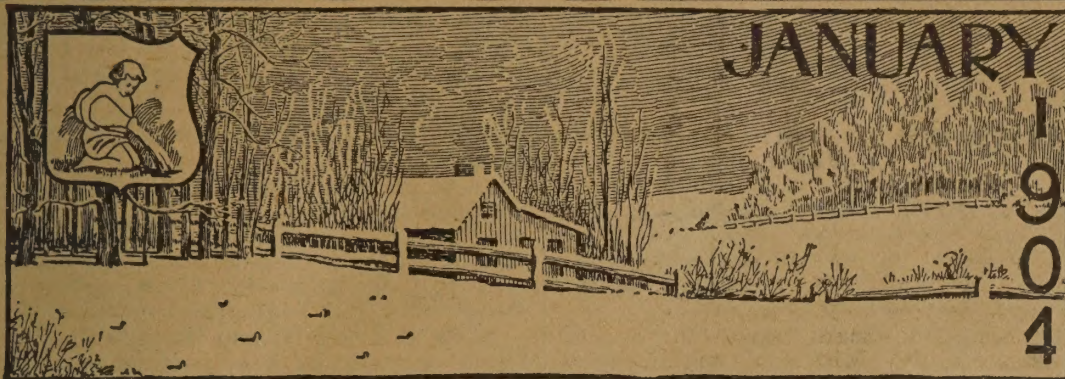
Interchangeable Disk or Shoe.

Great Clearance Between
Disks.

Sow All Kinds of Grain.

Many Exclusive Labor-Saving
Devices.

KENTUCKY DIVISION
American Seeding-Machine Co.,
SPRINGFIELD, OHIO.



MOON'S PHASES.

	BOSTON		CHICAGO		SEATTLE.	
	D.	H. M.	D.	H. M.	D.	H. M.
F.M.	3	0 47 M.	2	11 47 E.	2	9 47 E.
L.Q.	9	4 10 E.	9	3 10 E.	9	1 10 E.
N.M.	17	10 47 M.	17	9 47 M.	17	7 47 M.
F.Q.	25	3 41 E.	25	2 41 E.	25	0 41 E.

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

Sun rises.	Sun sets.	Moon sets.
H. M.	H. M.	H. M.

SUN SLOW.

Sun rises.	Sun sets.	Moon sets.
H. M.	H. M.	H. M.

HISTORICAL EVENTS, ETC.

1 Fr	Circumcision.	8	7 30	4 39	5 28	3	7 3	5 5	5 5
2 Sa	⊕ in perihelion.	II	7 30	4 40	rises	4	7 3	5 6	rises
1. 2d Sunday after Christmas. Luke 2. 9h. 10m. Day's Length, 10h. 3m.									
3 Su	3d. Armen. mass., '95.	II	7 30	4 40	5 36	4	7 3	5 6	5 58
4 M	☾ in perigee.	☾	7 30	4 41	6 47	5	7 3	5 7	7 5
5 Tu	Paris bombarded, 1871.	☾	7 30	4 42	8 0	5	7 3	5 8	8 14
6 W	☿ in ♍. Epiphany.	☿	7 30	4 43	9 14	6	7 4	5 9	9 23
7 Th	☿ stationary.	☿	7 30	4 44	10 26	6	7 4	5 10	10 29
8 Fr	☾ Eli Whitney d., 1825.	☾	7 29	4 45	11 31	7	7 4	5 10	11 30
9 Sa	☾ 9th. Astor lib. o., '54.	☾	7 29	4 46	morn	7	7 4	5 11	morn
2. 1st Sunday after Epiphany. Luke 2. 9h. 18m. Day's Length, 10h. 8m.									
10 Su	☿ in perihel'n. ☾ gr. lib. W.	☿	7 29	4 47	0 42	7	7 4	5 12	0 33
11 M	Alabama seceded, 1861.	☿	7 29	4 48	1 49	8	7 4	5 13	1 35
12 Tu	Bayard Taylor born, 1825.	☿	7 29	4 49	2 52	8	7 3	5 14	2 34
13 W	♂ ♀ ☾	☿	7 28	4 50	3 52	9	7 3	5 15	3 31
14 Th	Gen. Sharpe died, 1900.	☿	7 28	4 51	4 49	9	7 3	5 16	4 26
15 Fr	♂ ☾ ☾	☿	7 27	4 52	5 42	9	7 3	5 16	5 17
16 Sa	Edmond Spencer d., 1599	☿	7 27	4 54	6 27	10	7 3	5 17	6 3
3. 2d Sunday after Epiphany. John 2. 9h. 29m. Day's Length, 10. 15m.									
17 Su	☾ 17th. ♂ ☿. ☾ inferior.	☿	7 26	4 55	sets	10	7 3	5 18	sets
18 M	☾ ☿ ☾	☿	7 26	4 57	6 7	10	7 2	5 19	6 26
19 Tu	☾ in apogee	☿	7 25	4 58	7 6	11	7 2	5 20	7 20
20 W	♂ ☿ ☾	☿	7 25	4 59	8 4	11	7 2	5 21	8 14
21 Th	☿ gr. hel. lat. N.	☿	7 24	5 0	9 3	11	7 1	5 22	9 8
22 Fr	♂ ☿ ☾	☿	7 24	5 1	10 1	12	7 1	5 23	10 1
23 Sa	Justice Lamar died, 1893.	☿	7 23	5 2	10 59	12	7 1	5 24	10 54
4. 3d Sunday after Epiphany. Matt. 8. 9h. 42m. Day's Length, 10h. 25m.									
24 Su	Va. re-adm. Congress, 1870	☿	7 22	5 4	morn	12	7 0	5 25	11 50
25 M	☾ 25th. Gen. Ewell d. '72	☿	7 22	5 5	0 1	12	7 0	5 26	morn
26 Tu	☾ gr. libration E	☿	7 21	5 7	1 1	13	6 59	5 27	0 47
27 W	Jas. G. Blaine died, 1893.	☿	7 20	5 8	2 4	13	6 59	5 28	1 45
28 Th	♂ ♀ ☾. ☿ stationary.	☿	7 19	5 9	3 8	13	6 58	5 29	2 46
29 Fr	♂ ☿ ☾	☿	7 18	5 10	4 11	13	6 58	5 30	3 46
30 Sa	Prof. Asa Gray died, 1888.	II	7 17	5 11	5 11	13	6 57	5 31	4 47
5. Septuagesima Sunday. Matt. 20. 9h. 57m. Day's Length, 10h. 36m.									
31 Su	Str. Metropolis lost, 1878	II	7 16	5 13	6 4	14	6 56	5 32	5 42



WEATHER FORECASTS FOR 1904—CONTINUED



ern States from Texas to the Atlantic Coast. Dense fogs over the Great Lakes and New England.

23rd to 25th—General Rains.—Heavy rainfall over Southern States from Louisiana to the Virginias. Snow and sleet in Kansas, Nebraska and the Rocky Mountain region. Excessive rains on the Pacific slope.

26th to 29th—Cold Wave.—Very cold weather over the Northwest and Central Mississippi river valleys. Freezing weather as far south as Memphis, Atlanta and Wilmington. Temperature 38° below zero at Bismark, 22° below at Omaha, 10° below at St. Louis, 4° below at Indianapolis, 6° above at Nashville and 18° above at Atlanta.

The average temperature will be above normal at all points in the Northwest, the Lake Region and New England. Will be about normal elsewhere. The sections of excessive rainfall are over the Appalachian region and the Pacific slope. Elsewhere the precipitation will be below the average.

MARCH

1st to 4th—Rain Period.

—Heavy rainfall over Central and Southern States. Destructive floods in Ohio and lower Mississippi river valleys. Tornado storms in Louisiana and Arkansas.

5th to 7th—Windy Period.—Unusually high winds with falling temperature over the west and southwest sections. Snow storms and squally weather general over Lake region, the Middle Atlantic States and New England.

8th to 11th—Thunder Storms.—Sudden and severe storms at all points from Missouri to the Carolinas. Heavy hail in Kentucky and Tennessee. Thunder storms in Gulf and South Atlantic States. High winds over the Northwest and the Lake region.

12th to 14th—Cold Wave.—Very cold weather for March in the Northwest and Central West. Freezing weather as far south as Chattanooga, Little Rock and Palestine. Temperature 30° below zero at Bismark, 24° below at St. Paul, 8° below at

Dubuque, at zero at St. Louis and 5° above at Indianapolis.

15th to 18th—Rain Period.—Mild, soft weather with ice gorges in upper Ohio and Susquehanna rivers. General rains over Middle Atlantic States. Much rain in Oregon and Washington. High waters over entire Ohio river basin and Gulf slope.

19th to 22nd—Warm Wave.—Very mild, genial weather for March at all points east of the Mississippi river. Slush and mud general in Central and Middle Atlantic States. Temperature 78° at Memphis, 75° at Louisville, 72° at Parkersburg and 75° at Washington.

23rd to 27th—Storm Wave.—Rough, squally weather with heavy dashes of rain in the Southwest, lower Mississippi Valley and South Atlantic States. Cloudy, stormy conditions in Northwest and over Lake region. Heavy rainfall on north Pacific slope.

28th to 31st—Unsettled Period.—Tornado storms in Texas, Louisiana, Arkansas and Oklahoma. Showery weather from Missouri to the Carolinas and Virginias. Cold March-like weather over Northwest and Lake region.

The average temperature for March will be below the normal in the Northwest, and above over Eastern, Central and Southern portions. The precipitation will be excessive in the Central and Southern States and along the North Pacific Coast. Rainfall will be deficient elsewhere.

APRIL

1st to 4th—Cool Period.

Pleasant sunshine over Northwest and Southwest portions. Cold, frosty nights in Central and Middle Atlantic States. Brilliant spring-like weather in Gulf and South Atlantic States. Genial and balmy over Pacific slope.

5th to 8th—Thunder Storms.—Excessive rainfall with marked electrical activity over Florida, Alabama, Tennessee, Kentucky, Illinois and Iowa. General rains over Mid-

HOOSIER ONE-HORSE FERTILIZER HOE CORN DRILL.

Made entirely of steel and iron, except the handles.

Change of distance in planting can be made while machine is in operation. Feed Plates run smooth and true. Holes in plates all reamed true to size. With special plates this machine will plant peas, beans, sorghum, broom corn and garden seeds.

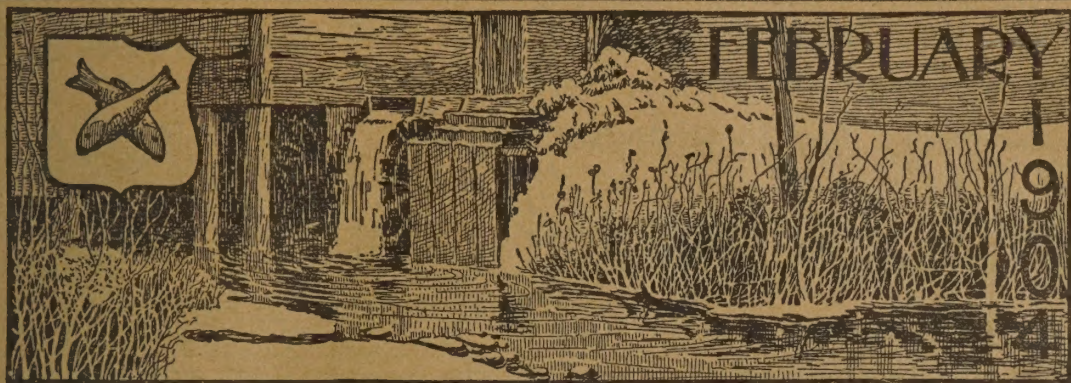
Write us about it,

HOOSIER DIVISION

AMERICAN-SEEDING MACHINE CO., Springfield, Ohio.



Accurate,
Satisfactory
Drop.



MOON'S PHASES.

	BOSTON	CHICAGO	SEATTLE.
D. H. M.	D. H. M.	D. H. M.	D. H. M.
F.M.	1 11 33 M.	1 10 33 M.	1 8 33 M.
L.Q.	8 4 56 M.	8 3 56 M.	8 1 56 M.
N.M.	16 6 5 M.	16 5 5 M.	16 3 5 M.
F.Q.	24 8 9 M.	24 5 9 M.	24 3 9 M.

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

HISTORICAL EVENTS, ETC.

D. M.	D. W.			Sun rises.	Sun sets.	Moon rises.	SUN SLOW.	Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	M.	H. M.	H. M.	H. M.
1 M		1st. δ $\frac{1}{2}$ $\odot$. $\odot$ in perigee	♌	7 15	5 14	rises	14	6 56	5 33	rises
2 Tu		Purif'n; Candlemas.	♌	7 14	5 15	6 48	14	6 55	5 34	7 0
3 W		Freedom of Greece, 1830.	♌	7 13	5 17	8 5	14	6 54	5 34	8 11
4 Th		Rev. in Nicaragua, 1898.	♌	7 12	5 18	9 16	14	6 54	5 35	9 16
5 Fr		Treaty with Brazil, 1891.	♌	7 10	5 19	10 28	14	6 53	5 36	10 21
6 Sa		Ft. Henry captured, 1862.	♌	7 9	5 20	11 37	14	6 52	5 37	11 25

6. Sexagesima Sunday. Luke 8. 10h. 14m. Day's Length, 10h. 47m.

7 Su		$\odot$ gr. libration W.	♌	7 8	5 22	morn	14	6 51	5 38	morn
8 M		8th. Gen. Sherm'n b. '20	♌	7 7	5 23	0 43	14	6 50	5 39	0 27
9 Tu		Gen. Harrison b. 1773	♌	7 6	5 24	1 45	14	6 50	5 40	1 25
10 W		δ gr. elong. W. $25^{\circ} 52'$	♌	7 4	5 25	2 43	14	6 49	5 41	2 21
11 Th		δ $\odot$ $\odot$.	♌	7 3	5 27	3 37	14	6 48	5 42	3 13
12 Fr		δ $\odot$ $\odot$.	♌	7 2	5 28	4 26	14	6 47	5 43	4 2
13 Sa		δ δ $\odot$. δ in $\odot$.	♌	7 0	5 29	5 8	14	6 46	5 44	4 46

7. Quinquagesima Sunday. Luke 18. 10h. 33m. Day's Length, 10h. 59m.

14 Su		St. Valentine.	♌	6 58	5 31	5 47	14	6 45	5 44	5 27
15 M		δ $\frac{1}{2}$ $\odot$. $\odot$ in apogee.	♌	6 57	5 32	6 21	14	6 44	5 45	6 4
16 Tu		16th. Shrove Tuesday.	♌	6 56	5 33	sets	14	6 43	5 46	sets
17 W		Ash Wednesday.	♌	6 55	5 35	6 56	14	6 42	5 47	7 3
18 Th		δ δ $\odot$. δ $\frac{1}{2}$ $\odot$.	♌	6 54	5 36	7 54	14	6 41	5 48	7 56
19 Fr		Florida ceded, 1821.	♌	6 53	5 37	8 51	14	6 40	5 49	8 47
20 Sa		First public 'phone, 1877.	♌	6 51	5 38	9 52	14	6 39	5 50	9 43

8. Quadragesima Sunday. Matt. 4. 10h. 51m. Day's Length, 11h. 12m.

21 Su		E'r hqu'ke at Corinth, '58	♌	6 49	5 40	10 52	14	6 38	5 50	10 40
22 M		Washington b., 1732.	♌	6 48	5 41	11 7	14	6 37	5 51	11 37
23 Tu		δ in aphelion.	♌	6 46	5 42	morn	14	6 36	5 52	morn
24 W		24th. St. Mat. Emb. day	♌	6 45	5 43	0 56	14	6 35	5 53	0 35
25 Th		Battle of Trenton, 1776	♌	6 43	5 44	1 55	14	6 34	5 54	1 33
26 Fr		δ δ $\frac{1}{2}$. δ δ $\frac{1}{2}$. Emb. day	♌	6 41	5 46	2 54	13	6 33	5 55	2 30
27 Sa		$\odot$ in $\odot$. Ember day.	♌	6 39	5 47	3 50	13	6 32	5 55	3 27

9. 2d Sunday in Lent. Matt. 15. 11h. 10m. Day's Length, 11h. 25m.

28 Su		Forrest Lieut. Gen., '65.	♌	6 38	5 48	4 40	13	6 31	5 56	4 20
29 M		Leap year, extra day.	♌	6 37	5 49	5 27	13	6 30	5 56	5 10



WEATHER FORECASTS FOR 1904—CONTINUED



dle Atlantic States. Great floods in Hudson, Susquehanna and Ohio river basins

9th to 12th—Mild Period.—Pleasant, genial sunshine at all points east and west. Temperature 95° at San Antonio 90° at New Orleans, 87° at Atlanta, 85° at Cincinnati, 78° at Indianapolis, 75° at Washington and 78° at St. Louis.

13th to 16th—Storm Wave.—Destructive rain and wind storms over the Northwest, the Lake region and New England. Thunder storms from Missouri to the Carolinas. Heavy rains in Florida and the West Gulf States.

17th to 20th—Cold Wave.—Low temperatures for April as far south as Kansas, Missouri, Kentucky and the Virginias. Temperature 10° at Helena, 15° at St. Paul, 18° at Omaha, 20° at Kansas City, 25° at Louisville and 32° at Lynchburg

21st to 24th—Sultry Period.—Sultry, changeable weather over Southern and Central States. Showery with stormy conditions along entire Atlantic Seaboard. Advanced season at all points except in Northwest and upper Lake region

25th to 28th—Warm Wave.—Fine, genial weather at all points in South and Southwest sections. Dry, droughty conditions from Kansas to the Dakotas. "Indian Summer" a marked feature of the weather in Middle Atlantic and New England States. Warm on Pacific slope.

29th to 30th—Unsettled Period.—Damp, foggy weather over Southern and Central States. Much wind in the West and Southwest. Stormy weather over North Atlantic coast states. The temperature will be above the average in the Northwest, the Lake Region and the Middle Atlantic and New England States. The rainfall will be excessive over lower Ohio River valley and the Central Mississippi basin. Heavy rainfall will be due in Florida Peninsula. Will be rather dry in the Northwest.

EVANS Disc and Spike-Tooth Harrows are the most useful in their class

MAY 1st to 3rd—Cool Period.—Cool, stormy to backward weather in Central and Western sections. Brilliant weather over the Rocky Mountain Plateau and the Northwest. Damp, foggy conditions in Texas, Oklahoma and Arkansas.

4th to 8th—Rian Period.—Cool weather on Pacific Slope and Rocky Mountain region. Universal rain period along a line extending from Texas to New Jersey. Destructive floods throughout the Appalachian highlands. Dangerous gales over Lake Region and the North Atlantic Seaboard.

9th to 12th—Thunder Storms.—Severe storms of wind and rain, accompanied with destructive hail and lightning in Texas, Oklahoma and Arkansas. Thunder storms general in Pennsylvania, Maryland and the Virginias.

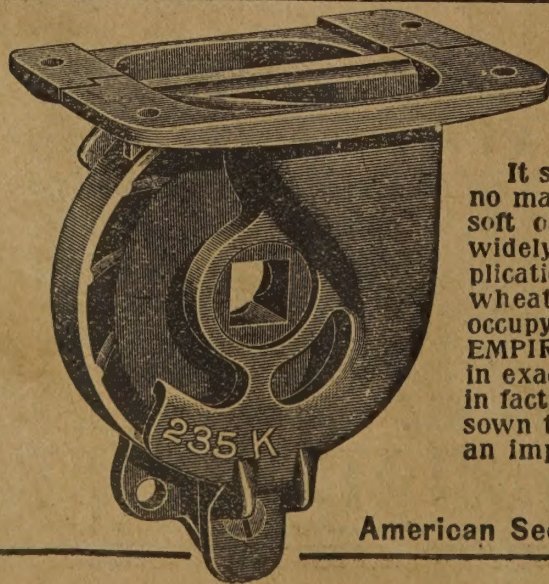
13th to 15th—Cool Period.—Local frosts in Nebraska, Iowa, Illinois, Indiana and Ohio. Temperature 26° at Bismark, 28° at Omaha, 30° at Davenport, 32° at Springfield, Ill., 30° at Indianapolis and 32° at Columbus.

16th to 20th—Warm Wave.—Hot, sultry weather over Kansas, Missouri, Iowa, the Lake Region and the Middle Atlantic States. Dry weather general over the Northwest. The want of rain generally felt in Alabama, Georgia and the Carolinas. Temperature 100° at Phoenix, 98° at Cheyenne, 95° at Kansas City, 92° at Chicago, 94° at Lynchburg and 88° at Harrisburg.

21st to 25th—Tornado Period.—Destructive storms general, with tornado tendencies in Kansas, Illinois and Kentucky. Heavy thunder and lightning in lower Mississippi Valley States. Excessive rainfall in Tennessee and the Virginias. Floods in the Ohio and Tennessee rivers.

26th to 31st—Windy Period.—Great danger to shipping on the Great Lakes. Stormy weather along North Atlantic Seaboard. Dust storms in Kansas, Nebraska and the Dakotas. Trying time for the mariner on the high seas.

Temperature will be above the average at

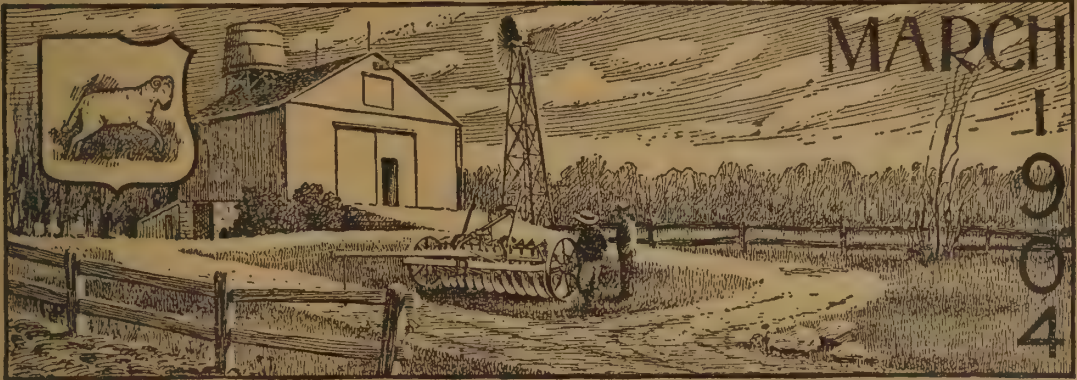


THIS CUT SHOWS THE EMPIRE FEED.

It sows by measure. A bushel is a bushel, no matter whether the seed be hard wheat or soft oats. The EMPIRE handles these two widely different grains without change or complication. A bushel of oats and a bushel of wheat do not weigh the same, but they do occupy the same amount of space. The EMPIRE sows these two widely different grains in exactly the same amount without change—in fact all kinds of grain. Peas, beans and corn sown to perfection without cracking the seed—an important feature.

EMPIRE DIVISION

American Seeding-Machine Co., Springfield, Ohio.



MOON'S PHASES.

	BOSTON		CHICAGO		SEATTLE.	
	D.	H. M.	D.	H. M.	D.	H. M.
F.M.	1	9 48 E.	1	8 48 E.	1	6 48 E.
L.Q.	8	8 1 E.	8	7 1 E.	8	5 1 E.
N.M.	17	0 39 M.	16	11 39 E.	16	9 39 E.
F.Q.	24	4 37 E.	24	3 37 E.	24	1 37 E.
F.M.	31	7 44 M.	31	6 44 M.	31	4 44 M.

MOON'S SIGNS.

LATITUDE

Of Boston, New
England, Middle
States, O., Ind., Ill.,
Mo., Kan., Neb.,
Iowa, Mich., Wis.,
Minn., Or. & Wash.

LATITUDE

Of Charleston, N.
& S. C., Ga., Ala.,
Tenn., Miss., La.,
Ark., Tex., New
Mexico and Cal.

SUN SLOW.

D.	D.	HISTORICAL EVENTS, ETC.	
M.	W.		

Sun	Sun	Moon
rises.	sets.	rises.
H. M.	H. M.	H. M.

Sun	Sun	Moon
rises.	sets.	rises.
H. M.	H. M.	H. M.

1	Tu	 1st. St. Day. ☾ in perig.	☾	6 36	5 50	rises	13	6 29	5 57	rises
2	W	 Nicholas I. died, 1855.	☾	6 34	5 52	6 51	12	6 28	5 58	6 54
3	Th	Alabama admitted, 1819.	☾	6 32	5 53	8 3	12	6 27	5 59	7 50
4	Fr	Chicago chartered, 1837.	☾	6 30	5 54	9 16	12	6 25	5 59	9 7
5	Sa	Anton Mesmer died, 1815.	☾	6 28	5 55	10 26	12	6 24	6 0	10 13

10. 3d Sunday in Lent. Luke 11. 11h. 30m. Day's Length, 11h. 38m.

6	Su	American Seeding - Ma-	☾	6 27	5 57	11 34	12	6 23	6 1	11 15
7	M	chine Co., incorp. 1903.	☾	6 25	5 58	morn	11	6 22	6 2	morn
8	Tu	 8th. Treaty with Jap.	☾	6 24	5 59	0 34	11	6 20	6 2	0 13
9	W	 ☽ ☽ ☾. [1854.	☾	6 22	6 0	1 31	11	6 19	6 3	1 8
10	Th	First English R. R., 1550.	☾	6 20	6 1	2 23	11	6 18	6 4	1 58
11	Fr	Philadelphia incor., 1789.	☾	6 18	6 2	3 7	10	6 16	6 5	2 44
12	Sa	Bishop Berkeley b., 1684.	☾	6 17	6 4	3 47	10	6 15	6 5	3 27

11. 4th Sunday in Lent. John 6 11h. 51m. Day's Length, 11h. 52m.

13	Su	☽ ☽ ☾	☾	6 15	6 6	4 23	10	6 14	6 6	4 5
14	M	☽ ☽ ☾. ☾ in apogee.	☾	6 13	6 7	4 55	10	6 13	6 7	4 40
15	Tu	☽ gr. hel. lat. 8.	☾	6 12	6 8	5 25	9	6 11	6 8	5 13
16	W	☽ ☽ ☾.	☾	6 10	6 9	5 52	9	6 10	6 8	5 46
17	Th	 17th. ☽ ☽ ☾. St. Patrick	☾	6 8	6 10	sets	9	6 9	6 9	sets
18	Fr	 ☽ ☽ ☾.	☾	6 6	6 11	7 45	8	6 7	6 10	7 38
19	Sa	Chas. IV. abdicates, '08	☾	6 5	6 12	8 45	8	6 6	6 11	8 31

12. 5th Sunday in Lent. John 8. 12h. 10m. Day's Length, 12h. 6m.

20	Su	☾ enters ♈. Spring begins	☾	6 3	6 13	9 47	8	6 5	6 11	9 32
21	M	Botany Bay settled, 1787.	☾	6 1	6 14	10 48	8	6 4	6 12	10 30
22	Tu	☾ gr. libration E.	☾	5 59	6 15	11 48	7	6 2	6 13	11 26
23	W	Thos. Hughes died, 1896.	☾	5 58	6 16	morn	7	6 1	6 13	morn
24	Th	 24th. ☾ ☽ ☾.	☾	5 56	6 17	0 47	7	6 0	6 14	0 23
25	Fr	Annunciation	☾	5 54	6 18	1 42	6	5 58	6 15	1 19
26	Sa	☽ ☽ ☾ superior.	☾	5 52	6 19	2 32	6	5 57	6 15	2 11

13. Palm Sunday. Matt. 27. 12h. 30m. Day's Length, 12h. 20m.

27	Su	☽ ☽ ☾.	☾	5 51	6 21	3 18	6	5 56	6 16	3 0
28	M	The Planet Pallas dis. '28.	☾	5 49	6 22	4 0	5	5 54	6 17	3 47
29	Tu	☾ in perigee.	☾	5 47	6 23	4 38	5	5 53	6 18	4 29
30	W	 E'rthqu'ke in Peru, '02	☾	5 45	6 24	5 14	5	5 52	6 18	5 11
31	Th	 31st. Char. Bronte d'55	☾	5 44	6 25	rises	4	5 50	6 19	rises



WEATHER FORECASTS FOR 1904—CONTINUED



all points west of the Mississippi river, but will be below the general average in the Central and Gulf States.

The rainfall will be above the average in the Southwest and Southeast portions. Distressing drought experienced throughout the Northwest during the month of May.

Did you ever investigate the merits of the Hoosier Corn Planter. Its simplicity and accuracy will please you.

JUNE 1st to 4th—Rain Period.

General rains from Kansas to the Dakotas and Minnesota. Heavy fog over the Great Lakes, with damp, backward conditions in the Middle States and New England.

5th to 8th—Thunder Storms.—Heavy local thunder storms in New York and Pennsylvania. Severe thunder and lightning at all points in the West and Southwest. General rains over the Rocky Mountain Plateau and the Northwest States.

9th to 12th—Cool Period.—Cool, damp, foggy and generally backward weather over Lake Region, the Middle Atlantic States and New England. Cloudy, threatening conditions over the Southwest and Central West. Temperature 35° at Bismark, 38° at St. Paul, 40° at Detroit and 45° at Pittsburg.

13th to 16th—Tornado Period.—Sultry, threatening weather over the West and Northwest. Tornadoes in Colorado, Nebraska and Minnesota. Floods and washouts in Kansas, Iowa and Illinois.

17th to 21st—Unsettled Period.—General rains from Kansas to New York. Cloudy, rainy period in Arkansas, Missouri, Illinois, Indiana and Kentucky. Heavy rains in New York and New England. Damp, foggy weather along the Eastern Gulf and South Atlantic States. Dry on the Pacific Slope.

22nd to 26th—Sultry Wave.—Hot and dry weather over Alabama, Mississippi, Eastern Kentucky and Tennessee. Disastrous wind and hail storms in Oklahoma and Kansas. Temperature 104° at San Antonio,

100° at Little Rock, 98° at Atlanta and 96° at Lynchburg.

27th to 30th—Thunder Storms.—Much electrical activity in the West and Northwest. Heavy thunder storms in Iowa, Nebraska, the Dakotas and Minnesota. Seasonable weather in Central and Middle Atlantic States.

The average temperature will be about normal at all points except over Lake Region and Middle Atlantic States, where it will be below the average.

The rainfall will be abundant except in the Gulf and South Atlantic States.

JULY 1st to 4th—Warm Wave.

Advanced heat at all points. General want of rain felt in Missouri, Kansas, Oklahoma, Arkansas and the West Gulf States. Hot, sultry conditions over the entire Atlantic Coast Plain. Temperature 102° at San Antonio, 101° at Wichita, 100° at St. Louis, 98° at Cincinnati and 99° at Lynchburg.

5th to 8th—Storm Period.—Thunder storms general in the Dakotas and Minnesota. Heavy down-pour of rain in Delaware, New Jersey and New England. Excessive rainfall over Florida Peninsula. Dry on Pacific Slope.

9th to 12th—Cool Wave.—Cool, westerly winds over the Northwest, the Lake Region, Central and Middle Atlantic States. Damp, foggy weather in Gulf and South Atlantic States. Temperature 34° at Bismark, 40° at Omaha, 46° at Chicago, 52° at Cincinnati, 54° at Parkersburg and 55° at Washington.

13th to 17th—Thunder Storms.—Destructive lightning and hail in Minnesota and Michigan. Great electrical activity and heavy rainfall in portions of Ohio, Pennsylvania and New England. Floods and washouts causing much damage along the Connecticut river valley.

18th to 21st—Unsettled Period.—Much cloudy and damp weather over Central and Eastern States, with continued wet and gloomy weather along East Gulf Coast and

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cial Fertilizers. A fact

ONE HORSE will handle it easily. 15 to 20 acres covered in a day. From 100 to 1,200 pounds of fertilizer can be sown per acre. Absolutely even sowing. No guessing. Operator can ride, knowing that the Fertilizer Feed is doing its work, and that a steady, continuous stream of fertilizer is being scattered in a thin sheet, and that every foot of ground is being covered. Write for catalogue.

Empire Division, American Seeding-Machine Co. Springfield, O.



APRIL

1904

MOON'S PHASES.

	BOSTON		CHICAGO		SEATTLE.	
	D.	H. M.	D.	H. M.	D.	H. M.
L.Q.	7	0 53 E.	7	11 53 M.	7	9 58 M.
N.M.	15	4 53 E.	15	3 53 E.	15	1 53 E.
F.Q.	22	11 55 E.	22	10 55 E.	22	8 55 E.
F.M.	29	5 36 E.	29	4 36 E.	29	2 36 E.

MOON'S SIGNS.

LATITUDE

Of Boston, New
England, Middle
States, O., Ind., Ill.,
Mo., Kan., Neb.,
Iowa, Mich., Wis.,
Minn., Or. & Wash.

LATITUDE

Of Charleston, N.
& S. C., Ga., Ala.,
Tenn., Miss., La.,
Ark., Tex., New
Mexico and Cal.

D.	D.	HISTORICAL EVENTS, ETC.	
M.	W.		

Sun		Sun		Moon	
rises.	sets.	rises.	sets.	rises.	sets.
H.	M.	H.	M.	H.	M.

SUN SLOW.

Sun		Sun		Moon	
rises.	sets.	rises.	sets.	rises.	sets.
H.	M.	H.	M.	H.	M.

1 Fr	♀ in aphelion. Good Fri.	♊	5 42	6 26	8 3	4	5 49	6 20	7 51
2 Sa	Prof. Morse died, 1872.	♋	5 40	6 27	9 14	4	5 48	6 20	8 57

14. Easter Sunday. John 20. 12h. 49m. Day's Length, 12h. 35m.

3 Su	♂ in ♄.	♌	5 39	6 28	10 19	4	5 46	6 21	9 59
4 M	♂ stationary. ♄ gr. lib. W.	♍	5 37	6 29	11 19	3	5 45	6 22	10 57
5 Tu	Robert Raikes d., 1811.	♍	5 35	6 31	morn	3	5 44	6 22	11 51
6 W	♂ ♄ ♄.	♎	5 33	6 32	0 15	3	5 42	6 23	morn
7 Th	♂ 7th. ♀ in perihelion.	♏	5 32	6 33	1 3	2	5 41	6 24	0 39
8 Fr	♂ ♀ ♄	♏	5 30	6 34	1 45	2	5 40	6 25	1 24
9 Sa	Lee surrendered, 1865.	♏	5 28	6 35	2 23	2	5 39	6 25	2 4

15. Low Sunday. John 20. 13h. 9m. Day's Length, 12h. 49m.

10 Su	♂ ♄ ♄. ♄ in apogee.	♏	5 27	6 36	2 57	2	5 37	6 26	2 41
11 M	Battle of Ravenna, 1512.	♐	5 25	6 37	3 26	1	5 36	6 27	3 14
12 Tu	French fleet cap., 1782.	♐	5 23	6 39	3 55	1	5 35	6 27	3 47
13 W	♂ ♄ ♄.	♐	5 22	6 40	4 21	1	5 34	6 28	4 19
14 Th	♂ ♄ ♄.	♑	5 20	6 41	4 49	0	5 32	6 29	4 52
15 Fr	♂ 15th. Matt. Arnold d.,	♑	5 19	6 42	5 20	0	5 31	6 29	5 27
16 Sa	♂ ♄ ♄. [1888.	♑	5 17	6 43	sets	ft	5 30	6 30	sets

16. 2d Sunday after Easter. John 10. 13h. 29m. Day's Length, 13h. 2m.

17 Su	♂ ♄ ♄.	♑	5 15	6 44	8 41	0	5 29	6 31	8 23
18 M	♂ gr. hel. lat. N.	♒	5 14	6 45	9 43	0	5 28	6 32	9 22
19 Tu	Dollinger Excom'd, 1871.	♒	5 12	6 46	10 42	1	5 26	6 32	10 19
20 W	♂ ♄ ♄.	♒	5 11	6 47	11 40	1	5 25	6 33	11 16
21 Th	♂ gr. elong. E. 20° 12'	♓	5 9	6 49	morn	1	5 24	6 34	morn
22 Fr	♂ 22d. Cortez lands Mex.,	♓	5 8	6 50	0 30	1	5 23	6 35	0 8
23 Sa	♂ ♄ ♄. St. Geo. [1519.	♓	5 6	6 51	1 17	2	5 22	6 35	0 58

17. 3d Sunday after Easter. John 16. 13h. 47m. Day's Length, 13h. 15m.

24 Su	♀ gr. hel. lat. S.	♓	5 5	6 52	1 59	2	5 21	6 36	1 43
25 M	St. Mark.	♓	5 3	6 53	2 37	2	5 20	6 36	2 27
26 Tu	♄ in perigee.	♓	5 2	6 54	3 12	2	5 19	6 37	3 6
27 W	R. W. Emerson d., 1882.	♊	5 0	6 55	3 48	2	5 18	6 38	3 48
28 Th	Dan. Counts behea'd, 1772	♊	4 59	6 56	4 23	2	5 17	6 39	4 29
29 Fr	♂ 29th. Macready d., 1873	♊	4 58	6 57	rises	3	5 16	6 40	rises
30 Sa	♂ gr. hel. lat. S.	♊	4 56	6 59	8 0	3	5 15	6 41	7 41



WEATHER FORECASTS FOR 1904—CONTINUED



Florida Peninsula. Heavy fogs over Great Lakes.

22nd to 26th—Storm Wave.—Unusually severe electrical storms in Ohio, Pennsylvania and New York. Thunder and heavy rain storms accompanied with destructive wind and hail in Minnesota, Wisconsin and Michigan. Generally seasonable weather in Iowa, Illinois, Indiana and Kentucky.

27th to 31st—Warm Period.—Clear, warm weather in Southern and Western sections. Sultry to changeable conditions in Northwest and Rocky Mountain Region. Dry and rainless period on the Pacific Slope.

Temperature generally below the average in western half of the country. Above the average over the Lake Region; about normal elsewhere.

The rainfall will be excessive from Minnesota to New England, but deficient in Southwest and on Pacific Slope.

AUGUST 1st to 4th—Hot Wave.—General hot spell south of 40th parallel. Temperature 104° at Phoenix, 102° at Wichita, 100° at Memphis, 99° at Atlanta and 98° at Lynchburg.

5th to 8th—Thunder Showers.—Unsettled weather on Gulf Coast and along Atlantic Coast Plain. Local thunder showers in Central and Middle States. Very foggy over Lake Region and New England.

9th to 13th—Warm Period.—Great heat. Tendency to drought in Central and Northwest portions. General prostration from heat; crops suffering for want of rain in Nebraska, the Dakotas and Minnesota.

14th to 17th—Showery Period.—General rains along the Gulf Coast and in Middle Atlantic States. Local showers in Kansas and Missouri. Threatening weather in Pennsylvania and New York. Normal conditions on Pacific Slope.

18th to 21st—Cool Period.—Local frosts in Montana, North Dakota and Minnesota. Cool nights and bright, clear days in Central and Western sections. Temperature 32° at

Helena, 30° at St. Vincent, 44° at Milwaukee, 48° at Indianapolis, 52° at Parkersburg and 54° at Philadelphia.

22nd to 25th—Drought Period.—Dry, parching weather over Western and Central portions. Drought very pronounced in Iowa, Illinois, Indiana and Kentucky. High temperatures in Montana, Nebraska and the Dakotas.

26th to 28th—Cool Wave.—Cool, frosty nights in Colorado, Wyoming and the Northwest. Dull, cloudy conditions over Central and Middle Atlantic States. Local rains along Gulf Coast and Florida Peninsula.

29th to 31st—Sultry Period.—Clear, bright days and brilliant moonlight nights. Dry, parching weather in upper Mississippi and Missouri river valleys. Streams low and water supplies short in Indiana and Ohio. A hot, sultry month; temperature above normal at all points except in extreme southern portions.

A general deficiency of rainfall will be felt everywhere save in Florida and the New England States.

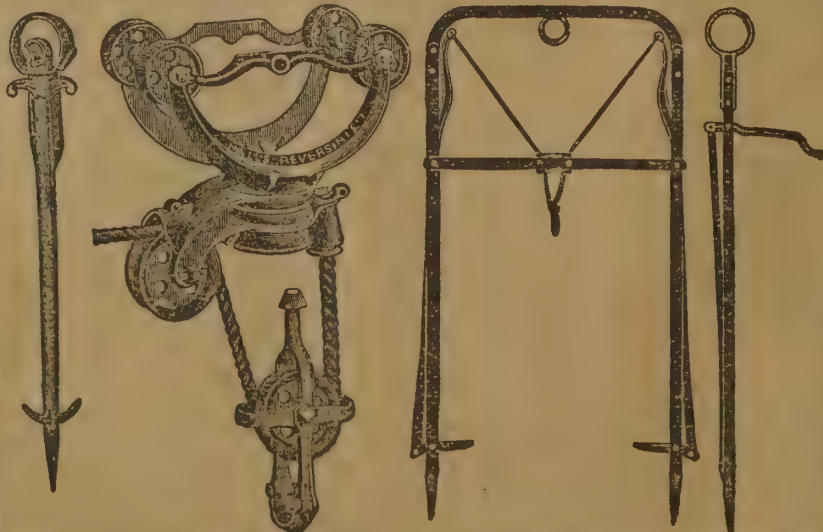
SEPTEMBER 1st to 4th—Cloudy Period.—

Generally backward, cloudy conditions at all points South and in the extreme Eastern sections. Sultry, warm weather with generally threatening aspects over Rocky Mountain Plateau.

5th to 8th—Drought Period.—Clear and brilliant weather throughout the entire Mississippi river basin. Drought becoming serious in Central and Western sections.

9th to 12th—Showery Period.—Severe local storms on Gulf coast. Destructive lightning and wind in Texas and Arkansas. Excessive rainfall in Florida and Arizona, and in Oregon and Washington.

13th to 17th—Warm Wave.—Heat and drought continuing unbroken in Western and Northwest and Central portions. Extensive forest fires in Wisconsin, Michigan, Indiana and Ohio. Temperature 102°



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MOON'S PHASES.

	BOSTON	CHICAGO	SEATTLE.
	D. H. M.	D. H. M.	D. H. M.
L.Q.	7 6 50 M.	7 5 50 M.	7 8 50 M.
N.M.	15 5 58 M.	15 4 58 M.	15 2 58 M.
F.Q.	22 5 19 M.	22 4 19 M.	22 2 19 M.
F.M.	29 3 55 M.	29 2 55 M.	29 0 55 M.

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

D.	D.												
M.	W.	HISTORICAL EVENTS, ETC.	Sun rises.	Sun sets.	Moon rises.	SUN EAST.	Sun rises.	Sun sets.	Moon rises.	H. M.	H. M.	H. M.	H. M.

18. 4th Sunday after Easter. John 16. 14h. 6m. Day's Length, 13h. 27m.

1 Su	St. Philip and St. James.	☾	4 54	7 0	9 3	3	5 14	6 41	8 41
2 M	☿ stationary. ☾ gr. lib. W.	☾	4 53	7 1	10 3	3	5 13	6 42	9 39
3 Tu	♂ ☿ ☾.	♂	4 52	7 2	10 56	3	5 12	6 42	10 32
4 W	Bat. of Tewksbury, 1471.	♂	4 51	7 3	11 41	3	5 11	6 43	11 18
5 Th	James L. Orr died, 1873.	♂	4 49	7 4	morn	3	5 10	6 44	morn
6 Fr	☾ Cavendish assas., 1882.	☾	4 48	7 5	0 21	3	5 9	6 45	0 1
7 Sa	☾ 7th. ♂ ♀ ☾.	☾	4 47	7 6	0 58	4	5 8	6 45	0 40

19. Rogation Sunday. John 16. 14h. 21m. Day's Length, 13h. 39m.

8 Su	☾ in apogee.	☾	4 46	7 7	1 28	4	5 7	6 46	1 15
9 M	♂ ☿ ☿.	☾	4 45	7 8	1 57	4	5 6	6 47	1 47
10 Tu	Louis XV. died, 1774.	☾	4 43	7 9	2 23	4	5 5	6 47	2 18
11 W	☾ ♀ ☾. ☿ in ☿.	☾	4 42	7 11	2 52	4	5 4	6 48	2 52
12 Th	♂ ♀ ☾. Ascension day.	☾	4 41	7 12	3 22	4	5 4	6 49	3 27
13 Fr	♂ ♀ ☾. ♂ ☿ ☾ inferior.	☾	4 40	7 13	3 50	4	5 3	6 50	3 59
14 Sa	♂ ☿ ☾.	☾	4 39	7 14	4 24	4	5 2	6 50	4 38

20. Sun. after Ascension. John 15-16. 14h. 37m. Day's Length, 13h. 50m.

15 Su	☾ 15th. ♂ ☿ ☾. ☾ gr. lib. E.	☾	4 38	7 15	sets	4	5 1	6 51	sets
16 M	☾ Mafeking reliev'd, 1900	☾	4 37	7 16	8 35	4	5 1	6 52	8 12
17 Tu	Lopez in Cuba, 1850	☾	4 36	7 17	9 34	4	5 0	6 53	9 10
18 W	♂ ☿ ☾.	☾	4 35	7 18	10 27	4	4 59	6 53	10 4
19 Th	French fleet cap., 1692.	☾	4 34	7 19	11 17	4	4 59	6 54	10 56
20 Fr	Lafayette died, 1834.	☾	4 33	7 20	morn	4	4 58	6 55	11 44
21 Sa	☿ in aphelion.	☾	4 33	7 21	0 1	4	4 58	6 55	morn

21. Whit Sunday. John 14. 14h. 50m. Day's Length, 13h. 59m.

22 Su	☾ 22d. ♂ ☿ ☿. ☾ in per.	☾	4 32	7 22	0 39	4	4 57	6 56	0 27
23 M	☾ Prus'ns ent. Paris, '71	☾	4 31	7 22	1 14	4	4 56	6 57	1 6
24 Tu	Kidd executed, 1701.	☾	4 30	7 23	1 47	3	4 56	6 57	1 45
25 W	☿ stationary. Ember day.	☾	4 29	7 24	2 22	3	4 55	6 58	2 26
26 Th	Battle of Ostrolinka, 1831.	☾	4 29	7 25	2 56	3	4 55	6 59	3 6
27 Fr	Ember day.	☾	4 28	7 26	3 31	3	4 55	6 59	3 45
28 Sa	Ember day.	☾	4 28	7 27	4 8	3	4 54	7 0	4 27

22. Trinity Sunday. John 3. 15h. 1m. Day's Length, 14h. 7m.

29 Su	☾ 29th. ☾ gr. libration W.	☾	4 27	7 28	rises	3	4 54	7 1	rises
30 M	♂ ☿ ☾. ♂ ☿ ☾.	☾	4 27	7 29	8 46	3	4 54	7 1	8 21
31 Tu	Chalmers died, 1847.	♂	4 26	7 30	9 35	3	4 53	7 2	9 11



WEATHER FORECASTS FOR 1904—CONTINUED



at Bismark, 100° at Omaha, 98° at Chicago, 99° at St. Louis and 98° at Cincinnati.

18th to 21st—Cool Period.—Killing frosts at many points as far south as the 38th parallel. Cool nights at all points south and east. Temperature 28° at Omaha, 30° at Denver, 32° at Kansas City, 34° at St. Louis, 30° at Indianapolis and 32° at Parkersburg.

22nd to 26th—Cloudy Period.—A general cloudy period over all Eastern sections. Much rain in Florida. Local showers common along the South Atlantic Coast.

27th to 30th—Drought Period.—Heavy, dull, smoky weather over Western, Central and Southern sections. Hot winds in Oklahoma, Kansas and Nebraska. General failure of corn crop in Ohio, Indiana, Iowa, Nebraska and the Dakotas.

The temperature will remain near normal.

There will be a marked deficiency of rainfall at all points except in Florida, New Mexico, Arizona, and Western Oregon and Washington.

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OCTOBER

1st to 3rd—Warm Wave.—Abnormal heat

at all points from Kansas to the Virginias. Scarcity of water and pasture for stock becoming more serious in Western and Central portions. Parched ground and dusty roads general.

4th to 8th—Drought Period.—Cool nights and warm days. Heat unbroken over all drought-stricken areas. Temperature 94° at Wichita, 92° at Omaha, 96° at St. Louis, 95° at Indianapolis and 92° at Parkersburg.

9th to 13th—Thunder Storms.—Local thunder storms in Nebraska, Texas, Oklahoma and along the South Atlantic Coast. General rains and much cloudy weather over Lake Region.

14th to 17th—Warm Period.—Fine, genial Autumn weather in South and Southwest portions. Distressing drought continuing in

the Northwest and over Illinois, Indiana, Ohio, Pennsylvania and New York.

18th to 22nd—Rain Period.—General rains along the Atlantic Coast Plain and over the Appalachian Highland. Drought broken at most points east of the Mississippi river. Heavy fog over the Great Lakes and stormy conditions on the New England Coast. Fine, genial conditions over Pacific Slope.

23rd to 27th—Warm Period.—Fine weather with brilliant moonlight nights in Central and Western sections. Summer-like warmth in the Northwest. Variable and unsettled weather in South and East portions.

28th to 31st—Cool Wave.—Sharp, crisp, cold nights with frost and freezing weather as far south as Oklahoma, Missouri and the Virginias.

The temperature will range above normal at most points west of the Mississippi river. Will be slightly below normal elsewhere.

The rainfall will be deficient at all points except on the Gulf Coast and on the South Atlantic Slope, where it will be excessive.

NOVEMBER

1st to 4th—Unsettled Period.—

Damp, cloudy, foggy conditions over the eastern half of the United States. Strong gales on Great Lakes and along the Gulf Coast.

5th to 9th—Heavy Rains.—Unusual rainfall from Alabama to New York. Very rough weather on the Great Lakes, with destructive wind storms in Pennsylvania and New York. Prolonged drought of the season practically broken.

10th to 14th—Cold Wave.—Cold, squally weather over Northwest section. Chilly northwest winds in Central and Eastern portions. Snow flurries and freezing temperature as far south as Northern Texas, Tennessee and the Carolinas. Mild over Pacific Slope.

15th to 18th—Mild Period.—Clear, mild weather at most points west of the Missis-

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ALL SIZES FROM 8 TO 22 DISKS OR SHOES.

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MOON'S PHASES.

	BOSTON		CHICAGO		SEATTLE.	
	D. H. M.		D. H. M.		D. H. M.	
L.Q.	6 0 53 M.		5 11 53 E.		5 9 53 E.	
N.M.	13 4 10 E.		13 3 10 E.		13 1 10 E.	
F.Q.	20 10 11 M.		20 9 11 M.		20 7 11 M.	
F.M.	27 3 23 E.		27 2 23 E.		27 0 23 E.	

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

D. M.	D. W.	HISTORICAL EVENTS, ETC.
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1 W	☾ in perihelion.	♈	4 26	7 31	10 17	3	4 53	7 2	9 56
2 Th	Corpus Christi.	♈	4 25	7 32	10 56	2	4 53	7 3	10 37
3 Fr	Transit of Venus, 1769.	♈	4 25	7 32	11 29	2	4 52	7 3	11 13
4 Sa	♈ ♀ ☾.	♈	4 24	7 33	11 59	3	4 52	7 4	11 47

23. 1st Sunday after Trinity. Luke 16. 15h. 10m. Day's Length, 14h. 12m.

5 Su	☾ in apogee.	♈	4 24	7 34	morn	2	4 52	7 4	morr
6 M	☾ 6th. Memphist'k'n, '62	♈	4 24	7 34	0 26	2	4 52	7 5	0 19
7 Tu	☾ Wash'ngt'n com. 1775.	♈	4 23	7 35	0 53	2	4 52	7 5	0 50
8 W	♈ gr. elong. W. 23° 46'.	♈	4 23	7 35	1 21	1	4 51	7 6	1 23
9 Th	♈ ☾ ☾.	♈	4 23	7 36	1 51	1	4 51	7 6	1 59
10 Fr	Crystal palace op'n'd, '51.	♈	4 22	7 36	2 21	1	4 51	7 7	2 34
11 Sa	♈ ♀ ☾. ☾ gr. lib. E.	♈	4 22	7 37	2 56	1	4 51	7 7	3 12

24. 2d Sunday after Trinity. Luke 14. 15h. 15m. Day's Length, 14h. 17m.

12 Su	Massacre at Paris, 1814.	♈	4 22	7 37	3 37	1	4 51	7 8	3 57
13 M	☾ 13th. ♀ ☾. ♀ ☾ ☾.	♈	4 22	7 37	4 23	0	4 51	7 8	4 46
14 Tu	☾ ☾ ☾.	♈	4 22	7 38	sets	0	4 51	7 8	sets
15 W	Emp. Frederic died, 1888.	♈	4 22	7 38	9 12	sl	4 51	7 9	8 51
16 Th	Thos. A. Bayne d., 1894.	♈	4 22	7 39	9 59	0	4 51	7 9	9 40
17 Fr	☾ in perigee.	♈	4 22	7 39	10 41	0	4 51	7 10	10 27
18 Sa	Cyclone in Iowa, 1882.	♈	4 23	7 39	11 18	1	4 51	7 10	11 9

25. 3d Sunday after Trinity. Luke 15. 15h. 17m. Day's Length, 14h. 19m.

19 Su	♈ ♀ ☾. ♀ in ☾.	♈	4 23	7 40	11 51	1	4 51	7 10	11 48
20 M	☾ 20th. Bl'k h'le Cal., 1756	♈	4 23	7 40	morn	1	4 52	7 11	morn
21 Tu	☾ ☾ ent. ☾. Sum. beg.	♈	4 23	7 40	0 26	1	4 52	7 11	0 28
22 W	Lieut. Greely rescue, 1884.	♈	4 23	7 40	0 59	2	4 52	7 11	1 6
23 Th	Akenside died, 1770.	♈	4 24	7 40	1 32	2	4 52	7 11	1 44
24 Fr	St. John Baptist.	♈	4 24	7 40	2 8	2	4 53	7 11	2 26
25 Sa	☾ gr. libration W.	♈	4 24	7 40	2 48	2	4 53	7 11	3 8

26. 4th Sunday after Trinity. Luke 6. 15h. 15m. Day's Length, 14h. 18m.

26 Su	♈ ☾ ☾.	♈	4 25	7 40	3 32	2	4 53	7 11	3 56
27 M	☾ 27th. ♀ ☾ ☾.	♈	4 25	7 40	rises	3	4 53	7 12	rises
28 Tu	☾ Bat. of M'nm'th, 1778.	♈	4 25	7 40	8 14	3	4 54	7 12	7 51
29 W	♈ ♀ ☾. St. Peter & St. Paul.	♈	4 26	7 40	8 54	3	4 54	7 12	8 34
30 Th	♈ in ☾.	♈	4 26	7 40	9 30	3	4 54	7 12	9 12



WEATHER FORECASTS FOR 1904—CONTINUED



Mississippi river. Frosty nights in Middle Atlantic States. Temperature 80° at San Antonio, 72° at Wichita, 68° at Omaha and 65° at St. Paul.

19th to 23rd—Storm Period.—Rain, sleet and snow over upper Mississippi and Ohio river basins. General snow fall in New York and New England. Cloudy, unsettled conditions in south and southwest portions.

24th to 27th—Unsettled Period.—Damp, cloudy, foggy weather in south and southwest. General rains in Central States and over Lake region. Much fog and dampness in New York and New England.

28th to 30th—Cold Wave.—Very low temperature for November in Western and Central portions. Freezing weather as far south as Texas, Arkansas, Mississippi, Alabama and Georgia. Temperature 10° at Omaha, 14° at Kansas City, 16° at St. Louis, 22° at Louisville and 25° at Atlanta.

The average temperature for the month will be below normal at all points east, south and west.

The rainfall will be especially heavy in Central and Middle Atlantic States, but will be deficient in south and west portions.

DECEMBER 1st to 4th—Blustery Period.—Generally windy and squally weather prevailing over eastern portions. Snow storms in New York and New England.

5th to 8th—Storm Wave.—Snow blockades general in the Northwest. Stormy weather over Lake Region. Heavy rainfall in Mississippi, Alabama and Tennessee.

Excessive rainfall on upper Pacific slope.

9th to 13th—Mild Wave.—Pleasant, genial weather in South and Southwest. Clear and frosty nights and generally open weather to the northern limits of the country. Temperature 58° at Omaha, 60° at St. Louis, 65° at Louisville and 68° at Atlanta.

14th to 17th—General Snows.—Heavy snow fall over Central States and the Appalachian Highland. Rain and sleet in Arkansas and Mississippi. Rough, squally weather over the Great Lakes.

18th to 22nd—Low Temperatures.—Great cold over Rocky Mountain region and the Middle West. Temperature 30° below zero at Helena, 28° below at Cheyenne, 25° below at Omaha, 14° below at St. Louis, 10° below at Indianapolis, 2° below at Parkersburg and at zero at Washington.

23rd to 27th—Storm Wave.—Rough, wintry weather at all points south and east. Destructive gales over Ohio river basin. Heavy rains in Pennsylvania, West Virginia and Kentucky. Floods in Tennessee and Cumberland river valleys.

28th to 31st—Cold Period.—Uniform cold weather in all sections. Freezing weather as far south as the Gulf coast. Great danger to orange industry on Florida Peninsula; ice harvesters busy in Northern, Central and Eastern States.

The average temperature will be normal at all points West and South.

The rainfall will be generally deficient west of the Mississippi river; at about normal in the West Gulf States, and above normal in the Central and Middle Atlantic States.

American
always
afterwards

Seeding
seeking
satisfied

Machine
more
most

Company
customers
completely



See that
Mold-
board?
It makes
a flat,
broad
Seed Bed.

Farmers' Favorite Disc Drills

have the "Plowfur" Disc.

The "Plowfur" makes a broad, flat seed bed, giving each grain of seed room for germination and development. It gives satisfaction. There are many other things you should know about the Farmers' Favorite. Write us.

BICKFORD & HUFFMAN DIVISION
AMERICAN SEEDING-MACHINE CO.,
SPRINGFIELD, OHIO.



MOON'S PHASES.

	BOSTON		CHICAGO		SEATTLE.	
	D.	H. M.	D.	H. M.	D.	H. M.
L.Q.	5	5 54 E.	5	4 54 E.	5	2 54 E.
N.M.	13	0 27 M.	12	11 27 E.	12	9 27 E.
F.Q.	19	3 49 E.	19	2 49 E.	19	0 49 E.
F.M.	27	4 42 M.	27	3 42 M.	27	1 42 M.

MOON'S SIGNS.

LATITUDE

Of Boston, New
England, Middle
States, O., Ind., Ill.,
Mo., Kan., Neb.,
Iowa, Mich., Wis.,
Minn., Or. & Wash.

Sun	Sun	Moon
rises.	sets.	rises.
H. M.	H. M.	H. M.

SUN FLOW.

LATITUDE

Of Charleston, N.
& S. C., Ga., Ala.,
Tenn., Miss., La.,
Ark., Tex., New
Mexico and Cal.

Sun	Sun	Moon
rises.	sets.	rises.
H. M.	H. M.	H. M.

D. D. M. W. HISTORICAL EVENTS, Etc.

1 Fr	♂ ♀ ☾.	♂	4 27	7 40	10 1	3	4 55	7 12	9 48
2 Sa	♂ ♀ ☽.	♂	4 27	7 40	10 29	4	4 55	7 12	10 20

27. 5th Sunday after Trinity. Luke 5. 15h. 12m. Day's Length, 14h. 16m.

3 Su	☾ in apogee.	♂	4 28	7 40	10 56	4	4 56	7 12	10 51
4 M	☽ in aphelion. [8101.	♂	4 28	7 40	11 25	4	4 56	7 12	11 25
5 Tu	☾ 5th. Adm. Farragut b.,	♂	4 29	7 39	11 52	4	4 57	7 11	11 57
6 W	☾ ☽ ☾.	♂	4 29	7 39	morn	4	4 57	7 11	morn
7 Th	Annexat'n of Hawaii, '98.	♂	4 30	7 39	0 20	5	4 58	7 11	0 30
8 Fr	♂ ♀ ☽ superior.	♂	4 31	7 38	0 54	5	4 58	7 11	1 7
9 Sa	♂ ♀ ☽. ☾ gr. libration E.	♂	4 32	7 38	1 30	5	4 58	7 11	1 48

28. 6th Sunday after Trinity. Matt. 5. 15h. 5m. Day's Length, 14h. 11m.

10 Su	♂ ♀ ☽.	♂	4 32	7 37	2 3	5	4 59	7 10	2 35
11 M	John Q. Adams b., 1767.	♂	4 33	7 37	3 2	5	4 59	7 10	3 26
12 Tu	♂ ☽ ☾. ☽ ☽ ☾.	♂	4 34	7 36	3 59	5	5 0	7 10	4 24
13 W	☽ 13th. ☽ ♀ ☾. ☽ ♀ ☾.	♂	4 45	7 36	sets	5	5 1	7 9	sets
14 Th	☾ ☾ in perigee.	♂	4 35	7 35	8 30	6	5 1	7 9	8 21
15 Fr	♂ gr. hel. lat. N.	♂	4 36	7 34	9 17	6	5 2	7 9	9 6
16 Sa	Col W.P. Johnston d., '99.	♂	4 37	7 34	9 53	6	5 2	7 8	9 47

29. 7th Sunday after Trinity. Mark. 8. 14h. 55m. Day's Length, 14h. 5m.

17 Su	Santiago surrend'r'd, 1898	♂	4 38	7 33	10 28	6	5 3	7 8	10 28
18 M	Deane Stanley died, 1881.	♂	4 39	7 32	11 4	6	5 4	7 8	11 9
19 Tu	☽ 19th. Greenhalge b., '42.	♂	4 30	7 32	11 36	6	5 4	7 7	11 48
20 W	☽ Bat Peachtree c'k, '64.	♂	4 41	7 31	morn	6	5 5	7 7	morn
21 Th	☽ ☽ ☽. ☾ gr. lib. W.	♂	4 42	7 30	0 11	6	5 6	7 6	0 26
22 Fr	Garibaldi born, 1807.	♂	4 43	7 29	0 48	6	5 6	7 6	1 8
23 Sa	☽ in perihelion.	♂	4 44	7 28	1 32	6	5 7	7 5	1 54

30. 8th Sunday after Trinity. Matt. 7. 14h. 44m. Day's Length, 13h. 56m.

24 Su	♂ ☽ ☾.	♂	4 44	7 28	2 17	6	5 8	7 4	2 41
25 M	St. James.	♂	4 45	7 27	3 6	6	5 8	7 4	3 31
26 Tu	Robert Fulton born, 1765.	♂	4 46	7 26	4 1	6	5 9	7 3	4 24
27 W	☽ 27th. P'nce, P.R. sur. '98	♂	4 47	7 25	rises	6	5 10	7 2	rises
28 Th	☽ ☽ ☾.	♂	4 48	7 23	8 3	6	5 10	7 2	7 48
29 Fr	Wm. Wilberforce d., 1833.	♂	4 49	7 22	8 33	6	5 11	7 1	8 21
30 Sa	☾ in apogee.	♂	4 50	7 21	8 59	6	5 11	7 0	8 52

31. 9th Sun. after Trinity. Luke 16. 14h. 29m. Day's Length, 13h. 48m.

31 Su	Mrs. Sprague Wash. d., '98	♂	4 51	7 20	9 25	6	5 12	7 0	9 24
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FARMERS' FAVORITE FERTILIZER DISC DRILL

(See Illustration on Opposite Page.)

We Also Manufacture Plain Disc Drills.

Both Fertilizer and Plain Drills Made in All Standard Sizes.

NOTICE the "Plowfur" Single Disc. New Balanced Angle Steel Frame.

Adjustable Wizard Fertilizer Positive Force Feed, with which can be sown from 40 to 820 pounds of fertilizer per acre, and which successfully sows all commercial fertilizers.

Our world-renowned Grain Feed accurately sows Wheat, Oats, Barley, Rye, Flax, Millet, Beets, Buckwheat, Peas, Beans, Corn and Grass Seed.

Grain Feeds operated by our patented Gear Speed Device. All changes of quantity ranging from 20 quarts of fine grain (wheat, rye and flax) to 216 quarts of coarse grain (oats, barley, corn, etc.) are effected by the use of only one change gear.

Farmers' Favorite Disc Drills will work satisfactorily in any field.

Made by Bickford & Huffman Division,
AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

THE EMPIRE FERTILIZER HOE DRILL

(See Illustration on Opposite Page.)

*Plain Hoe Drill similar in construction.
Made in All Standard Sizes.*

EMPIRE DRILLS are made substantial and strong, of the very best materials possible to procure. They are fully guaranteed, and the guarantee is good.

Empire Feed requires no change for different grains and is very simple and accurate. Will sow exactly the same amount of wheat, oats or any other grains without change.

Perfect Grain Box construction. Bottom made of triangular blocks placed between each feed run. No bridging of grain. Easy to clean.

Hoe Shifter operated by lever near center of drill.

Hoes may be set to different degrees of zigzag.

Hoe Roll and Handles operated by lever. Each hoe may be raised independently.

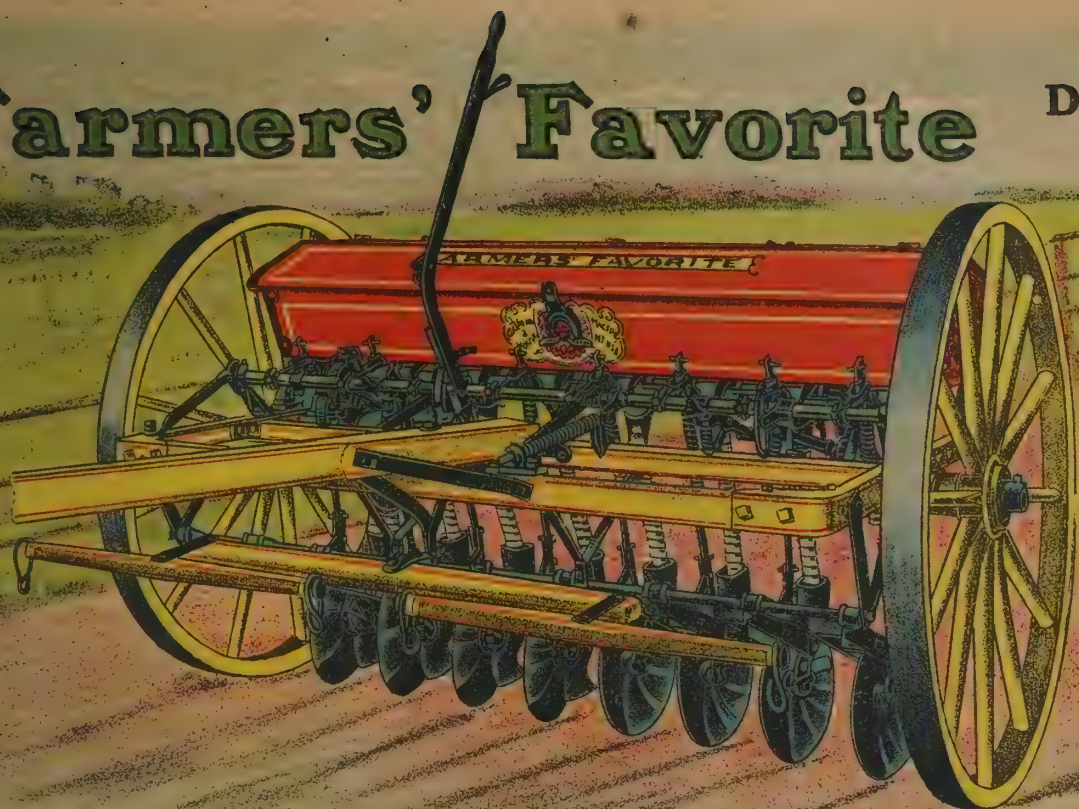
We use the famous Marks Fertilizer Force Feed.

Our Spring Hoe is simple, durable and effective. Can be changed to three positions by lever. No nuts or bolts to change.

Made by Empire Division,
AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

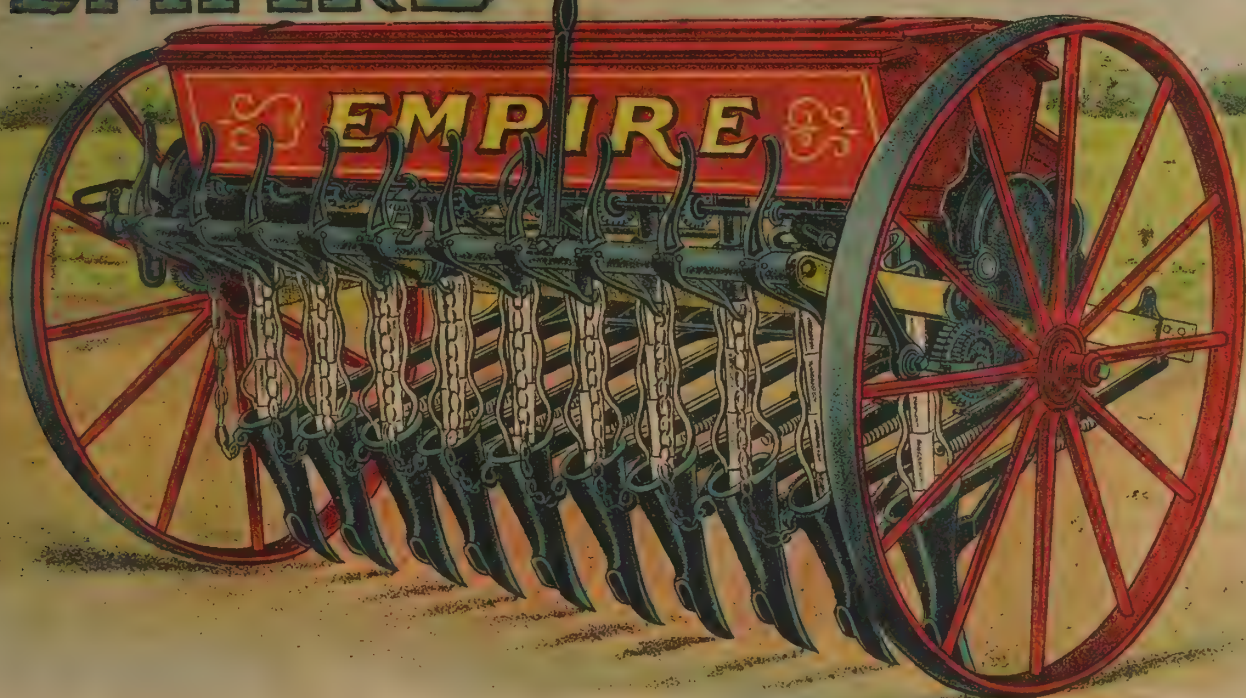
Farmers' Favorite

Disc
Drill



(See description on opposite page.)

EMPIRE Fertilizer Hoe Drill



(See description on opposite page.)



THE FIRESIDE



THE FARMER A GREAT POWER IN THE LAND.

You may talk all you please about the Declaration of Independence and all it guarantees in the way of life, liberty and the pursuit of happiness; argue and dispute from morning until night concerning the Constitution of the United States and all it treats of law and order and justice; debate until you are black in the face the whys and wherefores of the Monroe Doctrine and all it sets forth for the regulation of affairs international, but when it comes to downright, common, every day transaction, the farmer exerts a power throughout the length and breadth of this earthly sphere that is second to no political prescription that was ever penned or published. Among all classes of men he stands most conspicuously for his "independence" of them. He is the backbone of the "constitution" of the community in which he lives. His "doctrine" is that of stern duty to his occupation and loyalty to true citizenship.

The farmer is truly a distinguished factor in the make-up of the fabric of community. Through his diligence is supplied the woof to make the perfect web. He sows the seed and gathers the grain wherewith our bread is made. Thus he is responsible for the staff of life—the staff upon which all mankind is obliged to lean for subsistence. With the improved implements and tools that recent years have put at his disposal, he has greatly benefited himself as well as increased the activity of the grain markets of the world. Time was when farming was a drudge, but now it is a "pursuit of happiness." The modern grain drill and the corn-planter, too, encourages energy, assures thrift, and guarantees results which could never be obtained without their use.

Inventive genius is constantly planning that the farmer may flourish. So much deference is paid him that the factory fires never slumber nor the wheels cease to hum in order that

he may keep alive the power that so rightfully belongs to him—the power to sustain the life of every man, woman and child in the world in which we live.

SIMPLICITY.

Simplicity is sought by men of discrimination and judgment in all walks of life and in all matters. Our most successful manufacturers are those who have had simplicity for their watchword. The simple, deep, touching story well told has first brought to light many of our popular authors of the present day. The simple picture appeals to the heart and strikes a chord not touched by the elaborate canvas. Simplicity of language by dextrous use in debate has crushed the flowery orator on scores of occasions. A few years ago on a New York state fair ground several "drill" men were debating the respective merits of "the five" leading machines. One young man who had been "squelched" by his older adversaries, was finally able, by a discriminating appreciation of the force of simplicity in language, to silence them as follows: "The decision, gentlemen, of all recognized authorities deposes with irrefragable refutation against your ratiocinative speculations, wherein you seem desirous, by the futile process of analytical dialectics, to subvert the pyramidal structure of synthetically deducted opinions which have withstood the secular revolutions of physiological disquisition, and which I maintain to be transcendently self-evident, categorically certain and syllogistically demonstrable." At this point the speed device got out of gear.

When a doctor was asked what he thought of the reception he had attended the previous evening, he said:

"It was a carbuncle."

"What do you mean by that?"

"Why, it was a great gathering and a swell affair."



AUGUST

MOON'S PHASES.

	BOSTON	CHICAGO	SEATTLE.
	D. H. M.	D. H. M.	D. H. M.
L.Q.	4 9 3 M.	4 8 3 M.	4 6 3 M.
N.M.	11 7 58 M.	11 6 58 M.	11 4 58 M.
F.Q.	17 11 27 E.	17 10 27 E.	17 8 27 E.
F.M.	25 8 2 E.	25 7 2 E.	25 5 2 E.

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

D. M.	D. W.	HISTORICAL EVENTS, ETC.		Sun rises.	Sun sets.	Moon rises.	SUN SLOW.	Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.		H. M.	H. M.	H. M.	H. M.	M.	H. M.	H. M.	H. M.
1	M	Battle of the Nile, 1798.	☾	4 52	7 19	9 55	6	5 13	6 59	9 58
2	Tu	Colorado admitted, 1876.	☾	4 53	7 18	10 22	6	5 14	6 58	10 31
3	W	♂ ♀ ☾.	☾	4 54	7 17	10 52	6	5 14	6 57	11 4
4	Th	☾ 4th. Sam. J. Tild'n d., '86.	☾	4 55	7 16	11 26	6	5 15	6 56	11 42
5	Fr	☾ Xerxes died, 465 B.C.	☾	4 57	7 14	morn	6	5 16	6 55	morn
6	Sa	☾ gr. libration E.	☾	4 58	7 13	0 5	8	5 16	6 55	0 25

32. 10th Sun. after Trinity. Luke 19. 14h. 12m. Day's Length, 13h. 37m.

7	Su	☾ in ☾.	☾	4 59	7 11	0 50	6	5 18	6 54	1 12
8	M	♂ ♀ ☾.	☾	5 0	7 10	1 42	6	5 18	6 53	2 6
9	Tu	♂ ☾ ☾.	☾	5 1	7 9	2 43	5	5 18	6 52	3 7
10	W	♂ ☾ ☾. [1857.	☾	5 2	7 8	3 50	5	5 19	6 51	4 11
11	Th	☾ 11th. Lopez in Cuba,	☾	5 3	7 6	sets	5	5 20	6 50	sets
12	Fr	☾ ☾ ☾. ☾ in perigee.	☾	5 4	7 5	7 50	5	5 21	6 49	7 41
13	Sa	♂ ☾ ☾.	☾	5 5	7 3	8 25	5	5 21	6 48	8 22

33. 11th Sun. after Trinity. Luke 18. 13h. 56m. Day's Length, 13h. 25m.

14	Su	♀ gr. hel. lat. W.	☾	5 6	7 2	9 2	5	5 22	6 47	9 6
15	M	Napolean I. born, 1769.	☾	5 7	7 0	9 37	4	5 23	6 46	9 46
16	Tu	First gas in London, 1807.	☾	5 8	6 59	10 12	4	5 23	6 45	10 26
17	W	☾ 17th. ☾ in aphelion.	☾	5 9	6 58	10 50	4	5 24	6 43	11 8
18	Th	☾ gr. libration W.	☾	5 10	6 56	11 31	4	5 25	6 42	11 53
19	Fr	Pascal died, 1662,	☾	5 12	6 54	morn	4	5 25	6 41	morn
20	Sa	♂ ☾ ☾. ☾ stationary.	☾	5 13	6 53	0 16	3	5 26	6 40	0 39

34. 12th Sun. after Trinity. Mark 7. 13h. 37m. Day's Length, 13h. 13m.

21	Su	Tyndall born, 1820.	☾	5 14	6 51	1 4	3	5 26	6 39	1 28
22	M	New Mex. Annex'd, 1848.	☾	5 15	6 50	1 57	3	5 27	6 38	2 20
23	Tu	Com. Perry died, 1820.	☾	5 16	6 48	2 52	3	5 28	6 37	3 13
24	W	♂ ☾ ☾. St. Bartholomew.	☾	5 17	6 47	3 48	2	5 29	6 35	4 7
25	Th	☾ 25th. Br't. Harteb., '39.	☾	5 18	6 45	rises	2	5 29	6 34	rises
26	Fr	☾ in apogee.	☾	5 19	6 43	7 4	2	5 30	6 33	6 55
27	Sa	Czar Rus. pro. U.P. con., '99	☾	5 20	6 42	7 30	2	5 31	6 32	7 26

35. 13th Sun. after Trinity. Luke 10. 13h. 19m. Day's Length, 13h. 0m.

28	Su	Goethe born, 1749.	☾	5 21	6 40	7 56	1	5 31	6 31	7 58
29	M	Sess. Prus. Diet closes, '99.	☾	5 22	6 39	8 25	1	5 32	6 29	8 32
30	Tu	♂ ☾ ☾.	☾	5 23	6 37	8 55	1	5 33	6 28	9 5
31	W	John Bunyan died, 1688.	☾	5 24	6 35	9 26	0	5 33	6 27	9 41



HUMOROSITIES



Judge Edward B. Thomas, of the United States Circuit Court, claims to have a friend who is the worst henpecked man he ever knew. On a recent occasion an agent for a phonograph company dropped into the friend's office and inquired if he had a talking machine at home. "Yep," was the reply. "And may I ask of what company you bought it?" persisted the agent. "Didn't buy it; married it."

QUESTION—Why does a villain smile?

ANSWER—False face must hide what the heart doth know.

MOTHER—"Johnnie, oh, Johnnie!" No response. "Mary, have you seen Johnnie?"

MARY—"Sure, mum, an' he's out in the back yaard a-rubbin' pepper in the pusscat's eyes, an' singin' 'Hevin'll be my home.'"

A crowd of 100 Vassar girls went out into the fields to gather flowers, clad only in bathing suits. That day the fields were full of bloomers, and we guess we know one reason why flowers blush.

Here lies the body of Susan Lowder,
Who burst while drinking a Seidlitz
powder;
Called from this world to her heavenly
rest,
She should have waited till it effervesced.

QUESTION—Teacher asked boy: "Why does the sun rise in the east?"

ANSWER—"Because 'east makes things rise."

QUESTION—Why are women wicked?

ANSWER—They hook their skirts, steel their waists and crib their babies.

QUESTION—How should we look at the world?

ANSWER—Find tongue in trees, books in the running brooks, sermons in stones, and good in everything.

A retail grocer recently penned the following letter to a wholesale house:

"Dear Sirs:—Wherefore you have not sent me the sope? His it bekawse you think my money is not so good as nobody elses? Dam you! Please send sope at once, and oblige your respectful servant,

"RICHARD JONES."

"P. S.—Since writing the above, my wife has found the sope under the counter."

QUESTION—What is the best thing that any of us can do in this world?

ANSWER—Mind our own business.

QUESTION—Which is the largest room in the world?

ANSWER—Room for improvement.

A RECIPE FOR SHIRRED EGGS.

Carefully remove the shell from a fresh egg and hold the white and yolk firmly in the left hand. Now, with a fine needle and thread, gather the material in straight rows about half an inch apart. Draw up to the required fullness and fasten neatly the ends of the thread.

The "card system" for keeping business records is a great thing now-a-days. Quite a number of comparatively young men claim to have originated it, but it is thousands of years old. Moses invented the "card system." He wrote the Ten Commandments on tablets of stone.

The Evans Potato Planter does better work than you can do "by hand." It saves time, and when you dig the crop you will see a superior article and an increased yield. Your potatoes will also be "earlier."



MOON'S PHASES.

	BOSTON	CHICAGO	SEATTLE.
	D. H. M.	D. H. M.	D. H. M.
L.Q.	2 9 58 E.	2 8 58 E.	2 6 58 E.
N.M.	9 3 43 E.	9 2 43 E.	9 0 43 E.
F.Q.	16 10 13 M.	16 9 13 M.	16 7 13 M.
F.M.	24 0 50 E.	24 11 50 M.	24 9 50 M.

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

D. D.	HISTORICAL EVENTS, ETC.
M. W.	

Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.

SUN EAST.

Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.

1 Th	Gen. Banks died, 1894.	☾	5 25	6 33	10 2	0	5 34	6 26	10 20
2 Fr	☾ 2d. ☿ stationary.	☿	5 26	6 32	10 43	0	5 35	6 24	11 5
3 Sa	☾ ☾ gr. libration E.	☿	5 27	6 30	11 31	0	5 35	6 23	11 55

36. 14th Sun. after Trinity. Luke 17. 13h. 0m. Day's Length, 12h. 46m.

4 Su	☿ ☿ ☾. ☿ stationary.	☿	5 28	6 28	morn	1	5 36	6 22	morn
5 M	☿ ☿ ☿.	☿	5 29	6 27	0 25	1	5 36	6 20	0 49
6 Tu	Yellow day in N. E., 1881.	☿	5 30	6 25	1 28	1	5 37	6 19	1 50
7 W	☿ ☿ ☾.	☿	5 32	6 23	2 37	2	5 38	6 18	2 56
8 Th	Cap. of Sebastopol, 1855.	☿	5 33	6 22	3 51	2	5 38	6 16	4 5
9 Fr	☾ 9th. ☾ in perigee.	☿	5 34	6 20	5 6	2	5 39	6 15	5 15
10 Sa	☾ ☿ ☾. ☿ ☿ ☾.	☿	5 35	6 18	sets	3	5 39	6 14	sets

37. 15th Sun. after Trinity. Matt. 6. 12h. 40m. Day's Length, 12h. 32m.

11 Su	Bat. of Brandywine, 1777.	☿	5 36	6 16	7 34	3	5 40	6 12	7 40
12 M	Prof. R. A. Proctor d., 1888.	☿	5 37	6 14	8 8	3	5 41	6 11	8 20
13 Tu	Battle of Gibraltar, 1782.	☿	5 38	6 13	8 46	4	5 42	6 10	9 3
14 W	Humboldt born, 1769.	☿	5 39	6 11	9 28	4	5 42	6 8	9 48
15 Th	☿ ☿ ☾. ☾ gr. lib. W.	☿	5 40	6 9	10 13	5	5 43	6 7	10 35
16 Fr	☾ 16th. ☿ ☿ ☾. [1899.	☿	5 41	6 7	11 0	5	5 44	6 6	11 24
17 Sa	☾ neg. k'd Cart' rsv. Ill.,	☿	5 42	6 6	11 52	5	5 44	6 4	morn

38. 16th Sun. after Trinity. Luke 7. 12h. 21m. Day's Length, 12h. 18m.

18 Su	Cotton Gin invented, 1793	☿	5 43	6 4	morn	6	5 45	6 3	0 15
19 M	☿ ☿ ☾.	☿	5 44	6 2	0 47	6	5 46	6 2	1 9
20 Tu	☿ ☿ ☾.	☿	5 45	6 0	1 43	6	5 46	6 0	2 2
21 W	St. Matthew. Ember day.	☿	5 46	5 59	2 40	7	5 47	5 59	2 56
22 Th	Nathan Hale ex., 1776.	☿	5 47	5 57	3 38	7	5 48	5 58	3 50
23 Fr	☾ ent. ☿. Autumn beg.	☿	5 49	5 55	4 37	7	5 48	5 56	4 45
24 Sa	☾ 24th. ☿ stat. Emb. day	☿	5 50	5 53	rises	8	5 49	5 55	rises

39. 17th Sun. after Trinity. Luke 14. 12h. 1m. Day's Length, 12h. 5m.

25 Su	Mrs. Hemans born, 1794.	☿	5 51	5 52	6 29	8	5 49	5 54	6 34
26 M	☿ ☿ ☾. ☿ in ☿.	☿	5 52	5 50	6 57	8	5 50	5 52	7 6
27 Tu	Gen. Henry Heth d., 1899.	☿	5 53	5 48	7 28	9	5 51	5 51	7 41
28 W	Prof. Louis Pasteur d., 1895	☿	5 54	5 46	8 2	9	5 51	5 50	8 20
29 Th	Michaelmas.	☿	5 55	5 45	8 41	9	5 52	5 48	9 1
30 Fr	☿ in perihelion.	☿	5 56	5 43	9 26	10	5 53	5 47	9 48



AMUSEMENTS



MAGICAL AGE TABLE.

Much amusement is afforded in the following Magical Age Table. By its use the young lady or old maid can no longer hide her age. Just hand this table to a young lady and request her to tell you in which column or columns her age is contained, and add together the figures at the top of the columns in which her age is found and you will have the great secret. Thus, supposing her age to be 17, you will find that number in the first and fifth columns; add the first figures of these two columns.

1	2	4	8	16	32
3	3	5	9	17	33
5	6	6	10	18	34
7	7	7	11	19	35
9	10	12	12	20	36
11	11	13	13	21	37
13	14	14	14	22	38
15	15	15	15	23	39
17	18	20	24	24	40
19	19	21	25	25	41
21	22	22	26	26	42
23	23	23	27	27	43
25	26	28	28	28	44
27	27	29	29	29	45
29	30	30	30	30	46
31	31	31	31	31	47
33	34	36	40	48	48
35	35	37	41	49	49
37	38	38	42	50	50
39	39	39	43	51	51
41	42	44	44	52	52
43	43	45	45	53	53
45	46	46	46	54	54
47	47	47	47	55	55
49	50	52	56	56	56
51	51	53	57	57	57
53	54	54	58	58	58
55	55	55	59	59	59
57	58	60	60	60	60
59	59	61	61	61	61
61	62	62	62	62	62
63	63	63	63	63	63

THE GAME OF THE SEA AND HER CHILDREN.

The players seat themselves in a circle, leaving out one of their number, who represents the "Sea." Each person having assumed the name of some fish, the "Sea" walks slowly around outside the ring, calling her companions one after another by the titles they have adopted. Each one,

on hearing her name pronounced, rises and follows the "Sea." When all have thus left their seats, the "Sea" begins to run about, exclaiming, "The Sea is troubled! The Sea is troubled!" and suddenly seats herself, an example immediately followed by her companions. The one who fails to secure a chair becomes the "Sea," and continues the game as before.



MOON'S PHASES.

	BOSTON		CHICAGO		SEATTLE.	
	D.	H. M.	D.	H. M.	D.	H. M.
L.Q.	2	8 52 M.	2	7 52 M.	2	5 52 M.
N.M.	9	0 25 M.	8	11 24 E.	8	9 24 E.
F.Q.	16	0 54 M.	15	11 54 E.	15	9 54 E.
F.M.	24	5 56 M.	24	4 56 M.	24	2 56 M.
L.Q.	31	6 13 E.	31	5 13 E.	31	3 13 E.

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.

SUN EAST.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.

HISTORICAL EVENTS, Etc.

1 Sa | ♄ ♀ ☉. ☾ gr. lib. E. | 8 | 5 57 | 5 41 | 10 15 | 10 | 5 54 | 5 46 | 10 39

40. 18th Sun. after Trinity. Matt. 22. 11h. 40m. Day's Length, 11h. 50m.

2 Su	♄ 2d. ♄ ♀ ☾.	♄	5 59	5 39	11 13	10	5 53	5 44	11 36
3 M	☾ Modocs executed, 1872	♄	6 0	5 38	morn	11	5 55	5 43	morn
4 Tu	Prof. Swing died, 1894.	♄	6 1	5 36	0 17	11	5 56	5 42	0 38
5 W	Tecumseh killed, 1813.	♄	6 2	5 34	1 25	11	5 56	5 40	1 42
6 Th	♄ ♀ ☾.	♄	6 3	5 33	2 38	12	5 57	5 39	2 50
7 Fr	♄ ♀ ☾.	♄	6 4	5 31	3 54	12	5 58	5 38	4 1
8 Sa	☾ in perigee.	♄	6 5	5 29	5 10	12	5 58	5 36	5 10

41. 19th Sun. after Trinity. Matt. 9. 11h. 20m. Day's Length, 11h. 36m.

9 Su	☾ 9th. ♀ in ☿	♄	6 7	5 27	sets	12	5 59	5 35	sets
10 M	♄ ♀ ☾.	♄	6 8	5 26	6 38	13	6 0	5 34	6 53
11 Tu	☿ stationary.	♄	6 9	5 24	7 19	13	6 1	5 33	7 38
12 W	Robt. E. Lee died, 1870.	♄	6 10	5 23	8 4	13	6 1	5 32	8 25
13 Th	♄ ☿ ☾. ☾ gr. lib. W.	♄	6 11	5 21	8 51	14	6 2	5 30	9 15
14 Fr	Wm. cong'd Eng'd, 1066.	♄	6 12	5 19	9 43	14	6 3	5 29	10 7
15 Sa	Swallow captured, 1812.	♄	6 14	5 18	10 38	14	6 4	5 28	11 1

42. 20th Sun. after Trinity. Matt. 22. 11h. 1m. Day's Length, 11h. 23m.

16 Su	☾ 16th. Jno. Brown's raid	♄	6 15	5 16	11 35	14	6 4	5 27	11 55
17 M	♄ ♀ ☾. [1859.	♄	6 16	5 15	morn	14	6 5	5 26	morn
18 Tu	♄ ☿ ☾. St. Luke Evang'st	♄	6 17	5 13	0 32	15	6 6	5 24	0 50
19 W	♄ stationary.	♄	6 18	5 11	1 29	15	6 7	5 23	1 43
20 Th	☾ in apogee. [1899.	♄	6 19	5 10	2 29	15	6 7	5 22	2 39
21 Fr	Maj. Guy Howard, U.S.A.,	♄	6 21	5 8	3 28	15	6 8	5 21	3 33
22 Sa	John Sherman died, 1900.	♄	6 22	5 7	4 23	15	6 9	5 20	4 23

43. 21st Sun. after Trinity. John 4. 10h. 42m. Day's Length, 11h. 9m.

23 Su	♄ ☿ ☾. [phalia, 1648.	♄	6 23	5 5	5 24	15	6 10	5 19	5 18
24 M	☾ 24th. Treaty of West-	♄	6 24	5 4	rises	16	6 10	5 18	rises
25 Tu	♄ gr. hel. lat. N.	♄	6 25	5 3	6 3	16	6 11	5 17	6 19
26 W	First congress adj., 1774.	♄	6 27	5 1	6 40	16	6 12	5 16	7 0
27 Th	John G. Vassar died.	♄	6 28	5 0	7 23	16	6 13	5 15	7 45
28 Fr	St. Simon & St. Jude.	♄	6 29	4 58	8 11	16	6 14	5 14	8 35
29 Sa	♄ ♀ ☾. ☾ gr. lib. E.	♄	6 30	4 57	9 5	16	6 15	5 13	9 30

44. 22d Sun. after Trinity. Matt. 18. 10h. 25m. Day's Length, 10h. 57m.

30 Fr	☾ Sack. West dismis'd '88	♄	6 31	4 56	10 6	16	6 15	5 12	10 28
31 Sa	☾ 31st. ♄ ☿ ☾. Halloween	♄	6 32	4 54	11 11	16	6 16	5 11	11 30



AMUSEMENTS—Continued.



THE GAME OF THE TEN BIRDS.

The company sit in a circle, and the leader of the game says, "A good fat hen;" then each in their turn repeat the words. The leader says, "Two ducks, and a good fat hen," which is also repeated by each of the company separately; then "Three squeaking wild geese, two ducks, and a good fat hen;" then "Four plump partridges, three squeaking wild geese, two ducks, and a good fat hen;" then "Five pouting pigeons, four plump partridges, three squeaking wild geese, two ducks, and a good fat hen;" then "Six long-legged crows, five pouting pigeons, four plump partridges, three squeaking wild geese, two ducks, and a good fat hen;" then "Seven green parrots, six long-legged crows, five pouting pigeons, four plump partridges, three squeaking wild geese, two ducks, and a good fat hen;" then "Eight screeching owls, seven green parrots, six long-legged crows, five pouting pigeons, four plump partridges, three squeaking wild geese, two ducks, and a good fat hen;" then "Nine ugly

buzzards, eight screeching owls, seven green parrots, six long-legged crows, five pouting pigeons, four plump partridges, three squeaking wild geese, two ducks, and a good fat hen;" then "Ten bald eagles, nine ugly buzzards, eight screeching owls, seven green parrots, six long-legged crows, five pouting pigeons, four plump partridges, three squeaking wild geese, two ducks, and a good fat hen." The player must repeat all this separately after the leader, and in case of omission or mistake a forfeit must be paid.

THE GAME OF FROG IN THE MIDDLE.

This is another noisy game. A player selected by lot sits on the carpet, while the others form a circle around him, taking him unawares every time he turns his back, pulling him, pinching him, buffeting him, and pulling his hair. When he succeeds in catching one of them, the captive must change places with him. As the players dance and caper around the frog they cry, "Frog in the middle—catch him who can."

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NOVEMBER

MOON'S PHASES.

	BOSTON	CHICAGO	SEATTLE.
	D. H. M.	D. H. M.	D. H. M.
N.M.	7 10 37 M.	7 9 37 M.	7 7 37 M.
F.Q.	14 7 35 E.	14 6 35 E.	14 4 35 E.
F.M.	22 10 12 E.	22 9 12 E.	22 7 12 E.
L.Q.	30 2 38 M.	30 1 38 M.	29 11 38 E.
D. D.	HISTORICAL EVENTS, ETC.		
M. W.			

MOON'S SIGNS.

LATITUDE

Of Boston, New England, Middle States, O., Ind., Ill., Mo., Kan., Neb., Iowa, Mich., Wis., Minn., Or. & Wash.

LATITUDE

Of Charleston, N. & S. C., Ga., Ala., Tenn., Miss., La., Ark., Tex., New Mexico and Cal.

SUN FAST.

Sun rises.	Sun sets.	Moon rises.	Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.

1 Tu	All Saint's day.	♏	6 33	4 53	morn	16	6 17	5 10	morn
2 W	Josiah Quincy died, 1882.	♏	6 35	4 52	0 21	16	6 18	5 9	0 35
3 Th	♂ ♀ ♄. ♀ in ♍.	♏	6 36	4 51	1 32	16	6 19	5 8	1 41
4 Fr	Kepler died, 1630.	♏	6 38	4 49	2 46	16	6 20	5 7	2 49
5 Sa	♄ in perigee.	♏	6 39	4 48	3 58	16	6 21	5 6	3 55

45. 23d Sun. after Trinity. Matt. 22. 10h. 7m. Day's Length, 10h. 44m.

6 Su	Ben. Harrison elected, '88	♏	6 40	4 47	5 12	16	6 22	5 6	5 3
7 M	♏ 7th. ♀ ♄ ♄. ♀ ♄ ♄.	♏	6 42	4 46	6 27	16	6 23	5 5	6 13
8 Tu	♏ Dr. Talmage res., 1894.	♏	6 43	4 45	sets	16	6 24	5 4	sets
9 W	♏ ♀ ♄.	♏	6 44	4 44	6 40	16	6 24	5 3	7 2
10 Th	♏ ♄ ♄.	♏	6 45	4 43	7 30	16	6 25	5 2	7 54
11 Fr	♄ gr. libration W.	♏	6 47	4 42	8 25	16	6 26	5 2	8 49
12 Sa	♀ in aphelion.	♏	6 48	4 41	9 23	16	6 27	5 1	9 44

46. 24th Sun. after Trinity. Matt. 6. 9h. 51m. Day's Length, 10h. 32m.

13 Su	♀ in aphelion.	♏	6 49	4 40	10 21	16	6 28	5 0	10 40
14 M	♏ 14th. ♂ ♄ ♄.	♏	6 51	4 39	11 20	16	6 29	5 0	11 35
15 Tu	♏ Lord Chatham b., 1708	♏	6 52	4 38	morn	15	6 30	4 59	morn
16 W	♏ ♀ ♄.	♏	6 53	4 37	0 18	15	6 31	4 59	0 30
17 Th	♄ in apogee.	♏	6 54	4 36	1 17	15	6 32	4 58	1 24
18 Fr	Erup. of Mt. Etna, 1832.	♏	6 55	4 36	2 16	15	6 33	4 58	2 18
19 Sa	♏ ♄ ♄.	♏	6 57	4 35	3 13	15	6 34	4 57	3 10

47. 25th Sun. after Trinity. John 6. 9h. 36m. Day's Length, 10h. 23m.

20 Su	Good Hope doubled, 1497	♏	6 58	4 34	4 13	14	6 34	4 57	4 4
21 M	Voltaire died, 1694.	♏	6 59	4 34	5 14	14	6 35	4 56	5 1
22 Tu	♏ 22d. Thur. Weed d, 1882	♏	7 0	4 33	6 15	14	6 36	4 56	5 58
23 W	♏ Franklin Pierce b, 1804	♏	7 1	4 32	rises	14	6 37	4 56	rises
24 Th	♄ gr. libration E.	♏	7 2	4 32	6 7	13	6 38	4 56	6 31
25 Fr	♏ ♄ ♄.	♏	7 4	4 31	7 0	13	6 39	4 55	7 24
26 Sa	Wm. Cowper born, 1731.	♏	7 5	4 31	8 0	13	6 40	4 55	8 22

48. Advent Sunday. Matt. 21. 9h. 24m. Day's Length, 10h. 14m.

27 Su	Alex. Dumas, nov'st, d, '95	♏	7 6	4 30	9 3	13	6 41	4 55	9 24
28 M	Earthquake in N.E., 1814.	♏	7 7	4 30	10 10	12	6 42	4 54	10 27
29 Tu	♏ in aphelion.	♏	7 8	4 29	11 20	12	6 42	4 54	11 31
30 W	♏ 30th. St. Andrew.	♏	7 9	4 29	morn	11	6 43	4 54	morn



AMUSEMENTS—Continued.



THE FLYING GAME.

The players sit around the table. The leader begins by saying, "Robins fly!" and raises and waves his or her hands like wings; everybody present must do the same. Then he continues with great rapidity, "Eagles fly! moths fly! bees fly! ravens fly! this-tledown flies! feathers fly!" etc., each time waving his hands. At length he says something flies which **DOES NOT**, and keeps his hands still; but the players generally (if it is done quickly) will mistake and wave theirs at the wrong time. Whoever does so pays a forfeit. The leader should endeavor to confuse the followers by saying, "Cowards fly! ants fly! (ants do occasionally fly), plovers fly!" etc., and then, "Grass-hoppers fly! dogs fly!" etc. Any mistake made either way must be atoned for by a forfeit.

THE GAME OF CONCERT.

This play is commenced by the company selecting a conductor. The players then seat themselves in a semi-

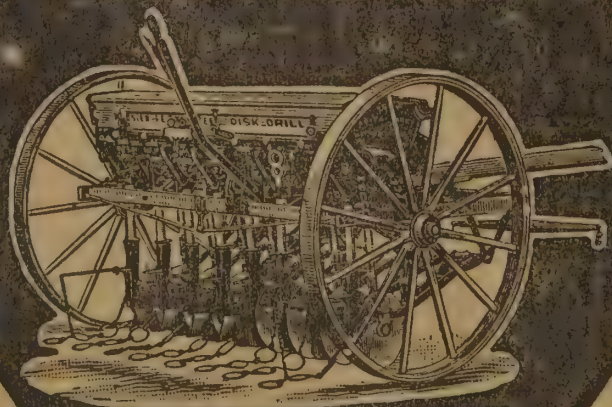
circle, and to each is assigned an imaginary musical instrument, with instructions how to play on it. The conductor next orders them to tune, and then making believe to wave a baton, he hums a lively air, in which all join, imitating by voice and gesture the instrument on which they are supposed to play, such as the violin, the harp, the big drum, the trombone, the flute, the violincello, the double bass, the symbols, etc. After that he waves his phantom baton, when all cease playing, and he calls "solos." All are now attention, and he makes believe to play on a particular instrument, imitating its sound and motion. Hereupon the player who is supposed to hold that instrument is bound to instantly join him in the tune and gestures; failing to do so, a forfeit is the result. A forfeit is also incurred when any instrument comes in at the wrong time.

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MOON'S PHASES.

	BOSTON	CHICAGO	SEATTLE.
	D. H. M.	D. H. M.	D. H. M.
N.M.	6 10 46 E.	6 9 46 E.	6 7 46 E.
F.Q.	14 5 7 E.	14 4 7 E.	14 2 7 E.
F.M.	22 1 1 E.	22 0 1 E.	22 10 1 M.
L.Q.	29 10 46 M.	29 9 46 M.	29 7 46 M.

MOON'S SIGNS.

LATITUDE

Of Boston, New
England, Middle
States, O., Ind., Ill.,
Mo., Kan., Neb.,
Iowa, Mich., Wis.,
Minn., Or. & Wash.

LATITUDE

Of Charleston, N.
& S. C., Ga., Ala.,
Tenn., Miss., La.,
Ark., Tex., New
Mexico and Cal.

SUN FAST.

D. M.	D. W.	HISTORICAL EVENTS, ETC.		Sun rises.	Sun sets.	Moon rises.	SUN FAST.	Sun rises.	Sun sets.	Moon rises.
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	M.	H. M.	H. M.	H. M.
1	Th	Gov. Wolcott, Ct., d., 1797.	♄	7 10	4 29	0 32	11	6 44	4 54	0 38
2	Fr	♂ ♀ ☾. ☾ in perigee.	♊	7 11	4 29	1 41	11	6 45	4 54	1 41
3	Sa	♂ ♀ ☽.	♊	7 12	4 28	2 52	10	6 46	4 54	2 45

49. 2d Sunday in Advent. Luke 21. 9h. 15m. Day's Length, 10h. 8m.

4	Su	♂ gr. hel. lat. S.	♊	7 13	4 28	4 6	10	6 46	4 54	3 53
5	M	♀ gr. hel. lat. S.	♊	7 14	4 28	5 17	10	6 47	4 54	5 0
6	Tu	♁ 6th. St. Nicholas.	♊	7 15	4 28	6 25	9	6 48	4 54	6 4
7	W	♁ 1st R.R. in Ger., 1835.	♊	7 16	4 28	sets	9	6 49	4 54	sets
8	Th	♂ ☽ ☾. ♂ ♀ ☾.	♊	7 17	4 28	6 9	8	6 50	4 54	6 34
9	Fr	Birmingham, Ala. mob., '88	♊	7 18	4 28	7 7	8	6 51	4 54	7 30
10	Sa	♂ ♀ ☾.	♊	7 18	4 28	8 6	7	6 51	4 54	8 26

50. 3d Sunday in Advent. Matt. 11. 9h. 9m. Day's Length, 10h. 2m.

11	Su	♂ ♀ ☾.	♊	7 19	4 28	9 4	7	6 52	4 54	9 22
12	M	Edwin Forrest died, 1872.	♊	7 20	4 28	10 4	6	6 53	4 55	10 18
13	Tu	1st U.S.N. armament, 1775	♊	7 21	4 28	11 4	6	6 54	4 55	11 14
14	W	♁ 14th. ♂ gr. el'ng. E. 20°	♊	7 22	4 29	morn	6	6 54	4 55	morn
15	Th	♁ Agassiz d., 1873. [30°	♊	7 23	4 29	0 4	5	6 55	4 55	0 8
16	Fr	♂ ♀ ☾. Ember day.	♊	7 23	4 29	1 2	5	6 55	4 56	1 0
17	Sa	Ember day.	♊	7 24	4 29	1 59	4	6 56	4 56	1 52

51. 4th Sunday in Advent. John 1. 9h. 5m. Day's Length, 10h. 0m.

18	Su	Boers invade C. Col., 1900.	♊	7 25	4 30	2 59	4	6 57	4 57	2 48
19	M	Cudahy kidnapped, 1900.	♊	7 25	4 30	4 0	3	6 57	4 57	3 45
20	Tu	U.S. bank closed, 1791.	♊	7 26	4 31	5 1	3	6 58	4 58	4 42
21	W	St. Thomas. ☾ gr. lib. E.	♊	7 26	4 32	6 1	2	6 58	4 58	5 39
22	Th	♁ 22d. ☾ cent. ♀. Win. beg.	♊	7 27	4 32	rises	2	6 58	4 58	rises
23	Fr	♁ ♂ ♀ ☾. ♂ in ☾.	♊	7 27	4 33	5 48	1	6 59	4 59	6 13
24	Sa	Thackeray died, 1863.	♊	7 27	4 33	6 53	1	7 0	5 0	7 15

52. Christmas Day. John 3. 9h. 6m. Day's Length, 10h. 0m.

25	Su	Christmas day.	♊	7 28	4 34	8 1	0	7 0	5 0	8 18
26	M	St. Stephen.	♊	7 28	4 35	9 11	sl	7 1	5 1	9 23
27	Tu	St. John Ev'ng'st. ☾ in per	♊	7 28	4 35	10 22	1	7 1	5 1	10 31
28	W	♂ ♀ ♀. Innocents.	♊	7 29	4 36	11 34	1	7 1	5 2	11 36
29	Th	♁ 29th. Gladstone b, 1809	♊	7 29	4 36	morn	2	7 2	5 3	morn
30	Fr	♁ ♂ ♀ ☾.	♊	7 29	4 37	0 42	2	7 2	5 3	0 37
31	Sa	♂ ♀ ☾ inferior.	♊	7 30	4 38	1 53	3	7 2	5 4	1 42



AMUSEMENTS—Continued.



GAME OF POSTMAN.

Materials required:—List of as many cities and towns as there are players, and a large handkerchief.

This is an exciting game, and may be played by an unlimited number, being especially adapted for a large party. One of the players is blindfolded, and he is called the postman, another volunteers to fill the office of postmaster, and all the rest of the players seat themselves around the room (which has been cleared of furniture as much as possible). No empty chairs must be left. The postmaster assigns to each player the name of a city or town. It would be well to prepare a list of places beforehand, as many as there are players, in case the postmaster's memory fails. The blind postman is then placed in the center of the room, and the postmaster takes a position where he can overlook the players. He then calls out: "I have sent a letter from St. Louis to New Haven," for example, and the players representing those places quickly change places. As they run, the postman tries to capture one of them; and if he can do this, or can manage to sit down in an empty chair, the player who is caught, or

whose chair he has taken, becomes postman. The postmaster is not changed unless he grows tired of his position, which is not an easy one, as he must call the mails between the places in quick succession. If a player remains seated when his name is called, he is obliged to take the postman's place.

GAME OF BLIND ARTISTS.

Materials required:—A blackboard, white chalk, an eraser, a large handkerchief, a first prize, a booby prize.

At the end of the room where the players are gathered is hung a blackboard; or, if you have one that will stand like an easel, so much the better. Ask each player in turn to walk up to the blackboard, then blindfold him, give him a piece of chalk, and ask him to draw a picture of a pig. The other players must all look carefully and critically at each pig as it is drawn, for, after all have finished, a vote is taken as to who has drawn the best pig, and that person receives a prize.

This is a good opportunity to give a funny prize in the shape of a pig; and a pig made of a lemon might be given to the one who made the poorest drawing.

EMPIRE DRILLS



ACCURATELY MEASURE ALL KINDS OF GRAIN WITHOUT CHANGE.

That is, if you set the Empire Feed to sow any amount from 24 to 128 quarts per acre, it will sow exactly that amount of wheat, oats or any other small grain without further change. A good stand of grain is assured when you sow with an Empire Drill.

*Empire Grain Drills do not bunch, skip or choke.
Made in all styles and sizes. Write for Free Catalogues.*

EMPIRE DIVISION, AMERICAN SEEDING-MACHINE CO.

SPRINGFIELD, OHIO.

*GESTATION RECORD TABLES.

ALWAYS GIVE BROOD
ANIMALS A NAME.

NOTE—On the blank lines in tables, write the name
of animal bred, and you will always have a record.

Jan.	Name of Mare	Name of Cow	Name of Sow	Name of Ewe	Feb.	Name of Mare	Name of Cow	Name of Sow	Name of Ewe
1	Dec. 2	Oct. 8	April 22	May 27	1	Jan. 2	Nov. 8	May 23	June 27
2	3	9	23	28	2	3	9	24	28
3	4	10	24	29	3	4	10	25	29
4	5	11	25	30	4	5	11	26	30
5	6	12	26	31	5	6	12	27	July 1
6	7	13	27	June 1	6	7	13	28	2
7	8	14	28	2	7	8	14	29	3
8	9	15	29	3	8	9	15	30	4
9	10	16	30	4	9	10	16	31	5
10	11	17	May 1	5	10	11	17	June 1	6
11	12	18	2	6	11	12	18	2	7
12	13	19	3	7	12	13	19	3	8
13	14	20	4	8	13	14	20	4	9
14	15	21	5	9	14	15	21	5	10
15	16	22	6	10	15	16	22	6	11
16	17	23	7	11	16	17	23	7	12
17	18	24	8	12	17	18	24	8	13
18	19	25	9	13	18	19	25	9	14
19	20	26	10	14	19	20	26	10	15
20	21	27	11	15	20	21	27	11	16
21	22	28	12	16	21	22	28	12	17
22	23	29	13	17	22	23	29	13	18
23	24	30	14	18	23	24	30	14	19
24	25	31	15	19	24	25	Dec. 1	15	20
25	26	Nov. 1	16	20	25	26	2	16	21
26	27	2	17	21	26	27	3	17	22
27	28	3	18	22	27	28	4	18	23
28	29	4	19	23	28	29	5	19	24
29	30	5	20	24	29	30	6	20	25
30	31	6	21	25	30	31	7	21	26
31	Jan. 1	7	22	26	31	Jan. 1	7	22	26

This is a good time to begin to think about buying a
Superior Disc Harrow on Wheels. It will save you time
and do better work than any other Harrow.

*EXPLANATION—If a mare is bred on Jan. 1, she is due to calve Oct. 8.
If a cow is bred Jan. 1, she is due to calve Oct. 8.
If a sow is bred Jan. 1, she is due to calve Oct. 8.
If a ewe is bred Jan. 1, she is due to calve Oct. 8.

GESTATION RECORD TABLES.

NOTE—On the blank lines in tables, write the name of animal bred, and you will always have a record.

Mar.	Name of Mare		Name of Cow		Name of Sow		Name of Ewe		Apr.	Name of Mare		Name of Cow		Name of Sow		Name of Ewe			
1	Jan. 31	Dec. 7	June 21	July 26	1	March 3	Jan. 7	July 22	Aug. 26	2	March 4	Jan. 8	July 23	Aug. 27	3	March 5	Jan. 9	July 24	Aug. 28
2	Feb. 1	8	22	27	4	6	10	25	30	5	7	11	26	31	8	8	12	27	Sept. 1
3	2	9	23	28	5	8	12	29	32	6	9	13	28	32	9	9	14	28	2
4	3	10	24	29	6	10	14	30	33	7	11	15	31	33	10	10	15	29	3
5	4	11	25	30	7	12	16	31	34	8	13	17	32	34	11	11	16	30	4
6	5	12	26	31	9	14	18	32	35	9	15	19	33	35	12	12	17	31	5
7	6	13	27	June 1	10	16	19	34	36	10	17	20	34	36	13	13	18	32	6
8	7	14	28	2	11	18	21	35	37	11	19	22	35	37	14	14	19	33	7
9	8	15	29	3	12	20	23	36	38	12	21	24	36	38	15	15	20	34	8
10	9	16	30	4	13	22	25	37	39	13	23	26	37	39	16	16	22	35	9
11	10	17	July 1	5	14	24	27	38	40	14	25	28	38	40	17	17	24	36	10
12	11	18	2	6	15	26	29	39	41	15	27	30	39	41	18	18	26	37	11
13	12	19	3	7	16	28	31	40	42	16	29	32	40	42	19	19	28	38	12
14	13	20	4	8	17	30	33	41	43	17	31	34	41	43	20	20	30	39	13
15	14	21	5	9	18	32	35	42	44	18	33	36	42	44	21	21	32	40	14
16	15	22	6	10	19	34	37	43	45	19	35	38	43	45	22	22	34	41	15
17	16	23	7	11	20	36	39	44	46	20	37	40	44	46	23	23	36	42	16
18	17	24	8	12	21	38	41	45	47	21	39	42	45	47	24	24	38	43	17
19	18	25	9	13	22	40	43	46	48	22	41	44	46	48	25	25	40	44	18
20	19	26	10	14	23	42	45	47	49	23	43	46	47	49	26	26	42	45	19
21	20	27	11	15	24	44	47	48	50	24	45	48	48	50	27	27	44	46	20
22	21	28	12	16	25	46	49	49	51	25	47	50	49	51	28	28	46	47	21
23	22	29	13	17	26	48	51	50	52	26	49	52	50	52	29	29	48	49	22
24	23	30	14	18	27	50	53	51	53	27	51	54	51	53	30	30	50	51	23
25	24	31	15	19	28	52	55	52	54	28	53	56	52	54	31	31	52	53	24
26	25	Jan. 1	16	20	29	54	57	53	55	29	55	58	53	55	Dec. 1	32	54	55	25
27	26	2	17	21	30	56	59	54	56	30	57	60	54	56	2	33	56	57	26
28	27	3	18	22	31	58	61	55	57	31	59	62	55	57	3	34	58	59	27
29	28	4	19	23	32	60	63	56	58	32	61	64	56	58	4	35	60	61	28
30	March 1	5	20	24	33	62	65	57	59	33	63	66	57	59	5	36	62	63	29
31	2	6	21	25	34	64	67	58	60	34	65	68	58	60	6	37	64	65	30

GESTATION RECORD TABLES.

NOTE—On the blank lines in tables, write the name of animal bred, and you will always have a record.

May	Name of Mare	Name of Cow	Name of Sow	Name of Ewe	J'ne	Name of Mare	Name of Cow	Name of Sow	Name of Ewe
1	April 2	Feb. 6	Aug. 21	Sept. 25	1	May 3	March 9	Sept. 21	Oct. 26
2	3	7	22	26	2	4	10	22	27
3	4	8	23	27	3	5	11	23	28
4	5	9	24	28	4	6	12	24	29
5	6	10	25	29	5	7	13	25	30
6	7	11	26	30	6	8	14	26	31
7	8	12	27	Oct. 1	7	9	15	27	Nov. 1
8	9	13	28	2	8	10	16	28	2
9	10	14	29	3	9	11	17	29	3
10	11	15	30	4	10	12	18	30	4
11	12	16	31	5	11	13	19	Oct. 1	5
12	13	17	Sept. 1	6	12	14	20	2	6
13	14	18	2	7	13	15	21	3	7
14	15	19	3	8	14	16	22	4	8
15	16	20	4	9	15	17	23	5	9
16	17	21	5	10	16	18	24	6	10
17	18	22	6	11	17	19	25	7	11
18	19	23	7	12	18	20	26	8	12
19	20	24	8	13	19	21	27	9	13
20	21	25	9	14	20	22	28	10	14
21	22	26	10	15	21	23	29	11	15
22	23	27	11	16	22	24	30	12	16
23	24	28	12	17	23	25	31	13	17
24	25	March 1	13	18	24	26	April 1	14	18
25	26	2	14	19	25	27	2	15	19
26	27	3	15	20	26	28	3	16	20
27	28	4	16	21	27	29	4	17	21
28	29	5	17	22	28	30	5	18	22
29	30	6	18	23	29	31	6	19	23
30	May 1	7	19	24	30	June 1	7	20	24
31	2	8	20	25	31				

GESTATION RECORD TABLES.

NOTE—On the blank lines in tables, write the name of animal bred, and you will always have a record.

July	Name of Mare	Name of Cow	Name of Sow	Name of Ewe	Aug.	Name of Mare	Name of Cow	Name of Sow	Name of Ewe
1	June 2	April 8	Oct. 21	Nov. 25	1	July 3	May 9	Nov. 21	Dec. 26
2	3	9	22	26	2	4	10	22	27
3	4	10	23	27	3	5	11	23	28
4	5	11	24	28	4	6	12	24	29
5	6	12	25	29	5	7	13	25	30
6	7	13	26	30	6	8	14	26	31
7	8	14	27	Dec. 1	7	9	15	27	Jan. 1
8	9	15	28	2	8	10	16	28	2
9	10	16	29	3	9	11	17	29	3
10	11	17	30	4	10	12	18	30	4
11	12	18	31	5	11	13	19	Dec. 1	5
12	13	19	Nov. 1	6	12	14	20	2	6
13	14	20	2	7	13	15	21	3	7
14	15	21	3	8	14	16	22	4	8
15	16	22	4	9	15	17	23	5	9
16	17	23	5	10	16	18	24	6	10
17	18	24	6	11	17	19	25	7	11
18	19	25	7	12	18	20	26	8	12
19	20	26	8	13	19	21	27	9	13
20	21	27	9	14	20	22	28	10	14
21	22	28	10	15	21	23	29	11	15
22	23	29	11	16	22	24	30	12	16
23	24	30	12	17	23	25	31	13	17
24	25	May 1	13	18	24	26	June 1	14	18
25	26	2	14	19	25	27	2	15	19
26	27	3	15	20	26	28	3	16	20
27	28	4	16	21	27	29	4	17	21
28	29	5	17	22	28	30	5	18	22
29	30	6	18	23	29	31	6	19	23
30	July 1	7	19	24	30	Aug. 1	7	20	24
31	2	8	20	25	31	2	8	21	25

NOTE—On the blank lines in tables, write the name of animal bred, and you will always have a record.

NOTE—On the blank lines in tables, write the name of animal bred, and you will always have a record.

Sept.	Name of Mare	Name of Cow	Name of Sow	Name of Ewe	Oct.	Name of Mare	Name of Cow	Name of Sow	Name of Ewe
1	Aug. 3	June 9	Dec. 22	Jan. 26	1	Sept. 2	July 9	Jan. 21	Feb. 25
2	4	10	23	27	2	3	10	22	26
3	5	11	24	28	3	4	11	23	27
4	6	12	25	29	4	5	12	24	28
5	7	13	26	30	5	6	13	25	March 1
6	8	14	27	31	6	7	14	26	2
7	9	15	28	Feb. 1	7	8	15	27	3
8	10	16	29	2	8	9	16	28	4
9	11	17	30	3	9	10	17	29	5
10	12	18	31	4	10	11	18	30	6
11	13	19	Jan. 1	5	11	12	19	31	7
12	14	20	2	6	12	13	20	Feb. 1	8
13	15	21	3	7	13	14	21	2	9
14	16	22	4	8	14	15	22	3	10
15	17	23	5	9	15	16	23	4	11
16	18	24	6	10	16	17	24	5	12
17	19	25	7	11	17	18	25	6	13
18	20	26	8	12	18	19	26	7	14
19	21	27	9	13	19	20	27	8	15
20	22	28	10	14	20	21	28	9	16
21	23	29	11	15	21	22	29	10	17
22	24	30	12	16	22	23	30	11	18
23	25	July 1	13	17	23	24	31	12	19
24	26	2	14	18	24	25	Aug. 1	13	20
25	27	3	15	19	25	26	2	14	21
26	28	4	16	20	26	27	3	15	22
27	29	5	17	21	27	28	4	16	23
28	30	6	18	22	28	29	5	17	24
29	31	7	19	23	29	30	6	18	25
30	Sept. 1	8	20	24	30	Oct. 1	7	19	26
					31	2	8	20	27

HOOSIER GRAIN & FERTILIZER HOE PRESSURE DRILL

(See Illustration on Opposite Page.)

MADE IN A GREAT VARIETY OF SIZES.

FURNISHED with Detachable Grass Seeder. Either Break Pin or Spring Hoes. Wood or Steel Wheels—best possible to make. Always reliable and ever satisfactory Hoosier Grain and Fertilizer Positive Force Feeds. Rear is free from obstruction. Operator can easily get at the hoes. Fertilizer sown in full view of operator. End Lever for raising hoes and applying pressure. Pressure need only be applied when wanted. Change of quantity can be made while machine is in motion. No loose gears of any kind. Chain Drive—no lost motion. Both ground wheels are drivers, hence no side draft. Solid Steel Frame, thoroughly braced. Our Low Hitch prevents neckweight. Thoroughly reliable and fully guaranteed. When you buy a Hoosier Drill you run no risks. They fulfill all our claims.

MADE BY Hoosier Division,
AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

SUPERIOR Disc Harrow *On Wheels.*

(See Illustration on Opposite Page.)

MADE IN FOLLOWING SIZES:

8 and 10 Discs for Two Horses.

14 and 16 Discs for Four Horses.

12 Discs for Three Horses.

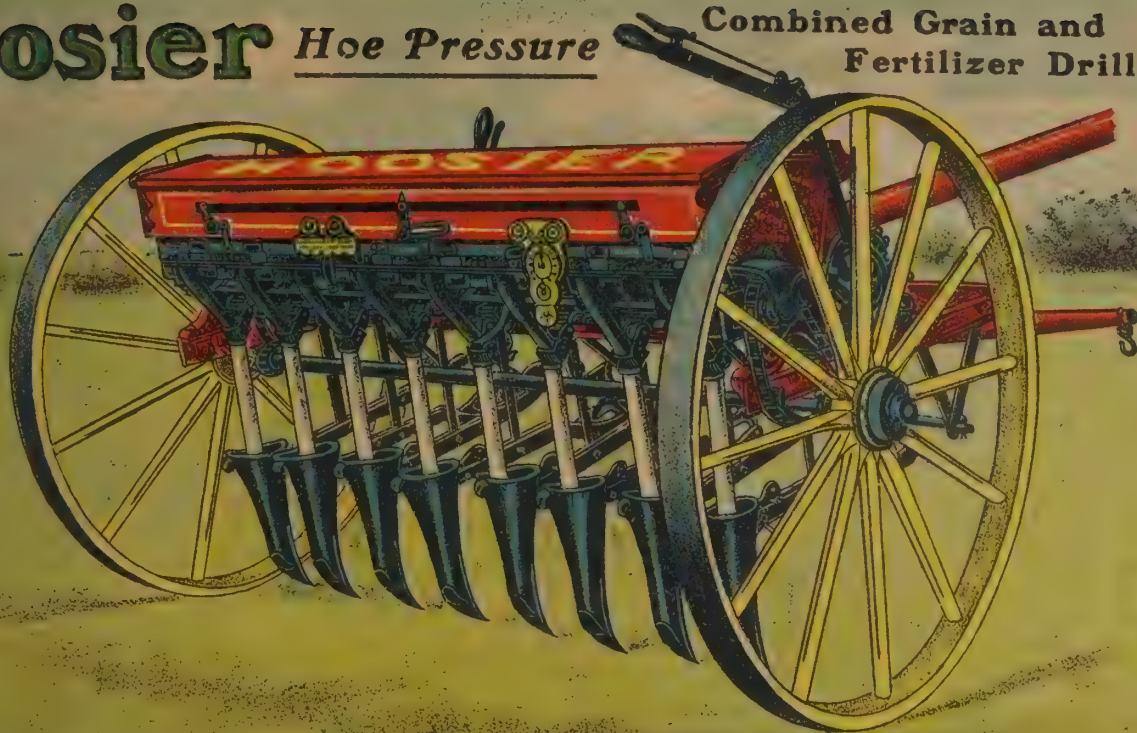
All 16-inch Discs.

FURNISHED WITH CENTER-CUT DISCS, OR WITH CENTER-CUT SHOVEL,
SPRING TRIP; OR WITHOUT EITHER.

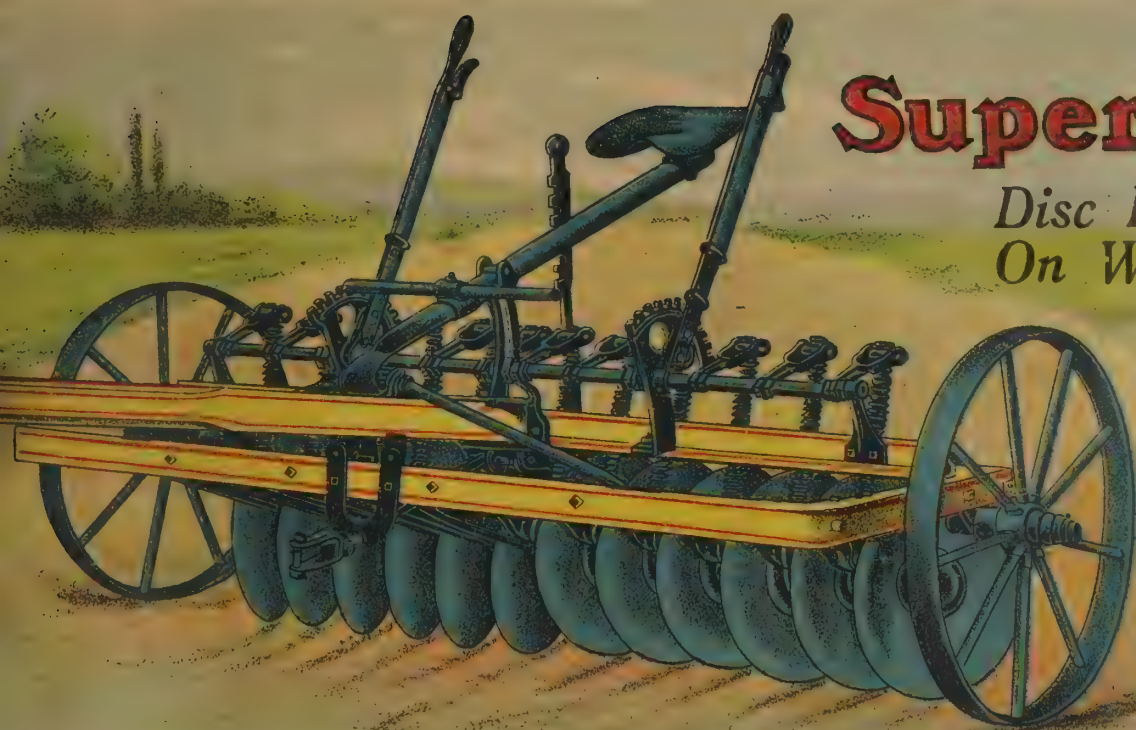
EASY to manage as a road cart, because it rides on its own wheels. No loading on wagon or sled. No accidents. One man or boy can manage it anywhere. Discs always sharp, because they never come in contact with road in going to or from field. Independent discs. If one disc strikes a stone or stump the disc rises up, clears the obstruction and begins work on the other side. Cultivates every available foot of ground and cuts it fine. Hollows and ridges all cut out. No stone trough needed. Pressure springs and weight of driver supply ample pressure for hardest ground. Greater or less depth secured by pressure applied to each disc. Lightest draft Harrow ever made and does the best work. Angle of discs never changes. Each disc attached independently to each bar. Bars made of high carbon steel. Impossible to bend them unless heated. Saves time, because it cultivates a wider strip. Ground wheels make turning easy. No lashing or whipping of tongue. Cheapest Harrow per pound on the market. Best Harrow ever made, because it does more and better work, will last longer, saves time and labor, and is easiest on both man and team.

MADE BY Superior Division,
AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

Hoosier Hoe Pressure Combined Grain and Fertilizer Drill



(See description on opposite page.)



Superior Disc Harrow On Wheels

Rides On
Its Own
Wheels.

(See description on opposite page.)

GESTATION RECORD TABLES.

NOTE—On the blank lines in tables, write the name of animal bred, and you will always have a record.

Nov.		Name of Mare		Name of Cow		Name of Sow		Name of Ewe		Dec.		Name of Mare		Name of Cow		Name of Sow		Name of Ewe	
1	4	Oct. 3	Aug. 9	Feb. 21	March 28	1	Nov. 2	Sept. 8	March 23	April 27	28	3	Nov. 2	Sept. 8	March 23	24	29	April 1	28
2	5		10		29	3		9			29	4		9			30		29
3	6		11		30	5		10			30	5		10			31		30
4	7		12		31	6		11			31	6		11					May 1
5	8		13		April 1	7		12			April 1	7		12					2
6	9		14		2	8		13			2	8		13					3
7	10		15		3	9		14			3	9		14					4
8	11		16		4	10		15			4	10		15					5
9	12		17	March 1	5	11		16			5	11		16					6
10	13		18	2	6	12		17			6	12		17					7
11	14		19	3	7	13		18			7	13		18					8
12	15		20	4	8	14		19			8	14		19					9
13	16		21	5	9	15		20			9	15		20					10
14	17		22	6	10	16		21			10	16		21					11
15	18		23	7	11	17		22			11	17		22					12
16	19		24	8	12	18		23			12	18		23					13
17	20		25	9	13	19		24			13	19		24					14
18	21		26	10	14	20		25			14	20		25					15
19	22		27	11	15	21		26			15	21		26					16
20	23		28	12	16	22		27			16	22		27					17
21	24		29	13	17	23		28			17	23		28					18
22	25		30	14	18	24		29			18	24		29					19
23	26		31	15	19	25		30			19	25		30					20
24	27		Sept. 1	16	20	26		Oct. 1			20	26		Oct. 1					21
25	28		2	17	21	27		2			21	27		2					22
26	29		3	18	22	28		3			22	28		3					23
27	30		4	19	23	29		4			23	29		4					24
28	31		5	20	24	30		5			24	30		5					25
29	Nov. 1		6	21	25	31		6			25	31		6					26
30			7	22	26			7			26			7					27

*WHEAT				*CORN			
Date	Sold to	Bushels	Price	Date	Sold to	Bushels	Price
April 19	Wm. L. ...						
20	Wed. Began ...						
21	Sat. ...						
22	Mon. ...						
23	Tue. ...						
24	Wed. ...						
25	Thurs. ...						
26	Fri. ...						
27	Sat. ...						
28	Sun. ...						
29	Mon. ...						
30	Tue. ...						
May 1	Wed. ...						
2	Thurs. ...						
3	Fri. ...						
4	Sat. ...						
5	Sun. ...						
6	Mon. ...						
7	Tue. ...						
8	Wed. ...						
9	Thurs. ...						
10	Fri. ...						
11	Sat. ...						
12	Sun. ...						
13	Mon. ...						
14	Tue. ...						
15	Wed. ...						
16	Thurs. ...						
17	Fri. ...						
18	Sat. ...						
19	Sun. ...						
20	Mon. ...						
21	Tue. ...						
22	Wed. ...						
23	Thurs. ...						
24	Fri. ...						
25	Sat. ...						
26	Sun. ...						
27	Mon. ...						
28	Tue. ...						
29	Wed. ...						
30	Thurs. ...						
May 1	Fri. ...						
2	Sat. ...						
3	Sun. ...						
4	Mon. ...						
5	Tue. ...						
6	Wed. ...						
7	Thurs. ...						
8	Fri. ...						
9	Sat. ...						
10	Sun. ...						
11	Mon. ...						
12	Tue. ...						
13	Wed. ...						
14	Thurs. ...						
15	Fri. ...						
16	Sat. ...						
17	Sun. ...						
18	Mon. ...						
19	Tue. ...						
20	Wed. ...						
21	Thurs. ...						
22	Fri. ...						
23	Sat. ...						
24	Sun. ...						
25	Mon. ...						
26	Tue. ...						
27	Wed. ...						
28	Thurs. ...						
29	Fri. ...						
30	Sat. ...						
June 1	Sun. ...						
2	Mon. ...						
3	Tue. ...						
4	Wed. ...						
5	Thurs. ...						
6	Fri. ...						
7	Sat. ...						
8	Sun. ...						
9	Mon. ...						
10	Tue. ...						
11	Wed. ...						
12	Thurs. ...						
13	Fri. ...						
14	Sat. ...						
15	Sun. ...						
16	Mon. ...						
17	Tue. ...						
18	Wed. ...						
19	Thurs. ...						
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Kentucky DRILLS

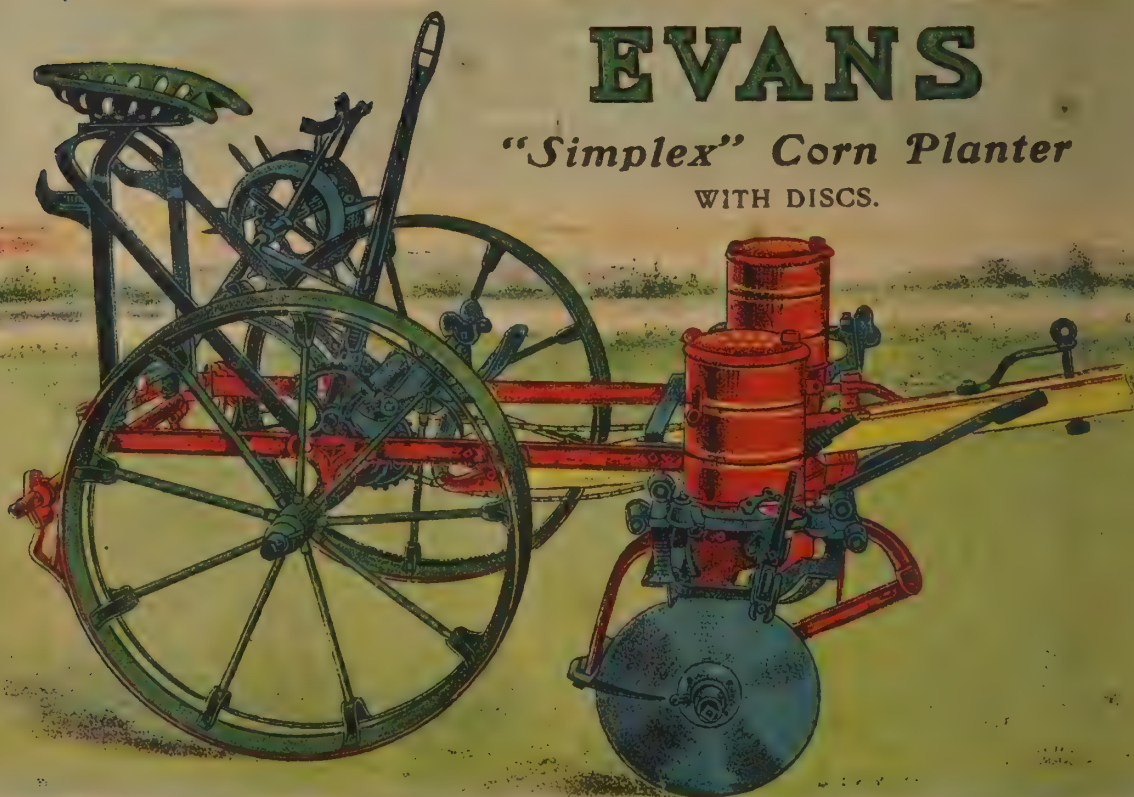
"AS GOOD AS WHEAT
IN THE MILL."



(See description on opposite page.)

EVANS

"Simplex" Corn Planter
WITH DISCS.



(See description on opposite page.)

KENTUCKY Grain Drill

(See Illustration on Opposite Page.)

INTERCHANGEABLE
DISK OR SHOE

Made in All Standard Sizes, Both Plain and Fertilizer.

THE illustration shows a Kentucky Drill equipped with both Disks and Shoes. The Kentucky has many exclusive features. Narrow Disk Bearings give greatest clearance between disks. Will not clog or gather trash. Improved Dust-proof Oiling Device for Disk Bearings. Kentucky Disk Bearings run as smooth as ball bearings. Positive Force Feed for both grain and fertilizer. Lightest Draft. Fewest Parts. Simplest Construction. Made of the highest grade material that money can buy. Perfect seeding assured under all conditions.

Made by Kentucky Division,
AMERICAN SEEDING-MACHINE CO., Inc.,
Springfield, Ohio.

EVANS "Simplex" Corn Planter

(See Illustration on Opposite Page.)

WE USE double discs; one of larger diameter than the other, and so constructed that a splendid furrow is opened and corn deposited at any required depth and properly covered. Double discs have a decided advantage over single discs from the fact that both sides of the furrow are prepared alike, while with the single disc one side of the furrow is pressed and packed the same as with the runner.

This Planter has an accurate Chain Feed. Change from full Hill Drop to Drill Drop is accomplished by simply reversing a casting. Check Rower is simple and accurate. The Throw-Off is very effective. Accurate Foot Drop, located within easy reach of operator's foot. It is supplied with a Positive Force Feed and a novel Dropping Device. Corn has a direct, unobstructed fall from the hopper into the valve, which is entirely new and effective. Thirty-inch open, concave or flat wheels. The "Simplex" is adjustable in width 3 feet 6 inches, 3 feet 8 inches and 3 feet 10 inches. Can be made as narrow as 3 feet or 3 feet 4 inches, when so ordered. Complete and successful Friction Reel, for winding and unwinding the wire, and is operated by foot-lever.

"Simplex" Planters can also be furnished with Runners, if so desired.

Send for Catalogue Evans Division,

AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

CATTLE						HOGS					
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[illegible]

LAMBS

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EGGS

[illegible]

POULTRY

BUTTER

MISCELLANEOUS

[illegible]



FOR THE COOK



WAFFLES.—Three eggs, three cups sweet milk, three tablespoonfuls melted butter, teaspoonful of salt, two teaspoonfuls of baking powder, and flour to mix quite a thin batter—much thinner than for griddle cakes. Have the waffle iron hot and turn often enough to not burn one side and have the other white. Serve hot with butter and maple syrup.

CORN CAKES.—Take the grated canned corn, if it can be had; if not, the whole corn may be used. To a can of corn add one pint of sweet milk and two eggs beaten light; salt to taste; two teaspoonfuls baking powder and sufficient flour to make thick batter. Fry in hot lard like fritters, or, like griddle cakes, on greased gridirons.

FRITTERS.—Beat three eggs very light with a pinch of salt; add a heaping tablespoonful of butter and a pint of flour and a scant pint of buttermilk. Mix smooth and drop by spoonfuls into deep fat, which must be boiling. Fry to a light brown, skim out and sprinkle with sugar. Serve hot with wine sauce. A very nice way is to have the wine, butter and sugar on the table and each person season as they think best.

PARKER HOUSE ROLLS.—One pint sweet milk; one quart flour; two tablespoonfuls sweet lard; two tablespoonfuls sugar; one-half teaspoonful salt; one small cup soft yeast; heat the milk but do not boil it; put in the lard and let it melt. When lukewarm pour over the flour and sugar; add salt and yeast. Let raise and mix stiff. After the dough raises again roll one-fourth inch thick cut with biscuit cutter, butter top fold over; let raise for one half hour; bake twenty minutes in a moderate oven.

CREAM CAKE.—Three eggs, two cups sugar, two-thirds cup butter, one cup sweet milk, two teaspoonfuls baking powder and enough flour to make a moderately thin batter. Beat thoroughly. This makes four nice layers.

For cream use one egg, one cup sugar, two-thirds cup sweet milk, two

tablespoonfuls flour and any flavoring desired. First beat the egg, then add sugar and mix well, then add flour, mixing it thoroughly, then put in the milk, and butter the size of an egg, which I had almost forgotten. Set this mixture on the stove and stir constantly. When thick set off and flavor. Spread between layers while hot.

FRIED CAKES.—One and one-half cups sugar, two eggs, one cup sour cream, one pint buttermilk, one teaspoonful soda. I always roll the cakes and cut them all ready to fry before I commence. I use my large bake pan, leaving off the lid, to fry them in. This will make three dozen cakes, and they can all be fried in three panfuls.

SUET PUDDING.—One cup suet, one cup brown sugar, one cup sour milk, one-half cup raisins, three cups flour, one teaspoonful soda, pinch of salt, bake two and one-half hours.

PEACH ROLL.—Mix one pint flour, two teaspoonfuls baking powder, one-half teaspoonful salt, then mix in one large tablespoonful butter, wet into an easily handled dough with sweet milk, then roll out, place pared quartered peaches in the center, roll the dough over, place on a cloth and set in a covered steamer over boiling water to steam for one and one-half hours, then serve with sweet, plain cream and sugar. This roll takes the place of apple dumplings and a raspberry roly-poly. A peach brown betty may be made according to the one made with apples. Dutch peach cake is as good as apple cake.

PORK FRUIT CAKE.—Chop fine one cupful of sweet salt pork after removing the outside skin, add one cupful boiling water, one cupful brown sugar, one cupful molasses, and four and one-half cupfuls flour. Add one cupful seeded raisins, one teaspoonful each of cloves, cinnamon and nutmeg. Dissolve one teaspoonful soda and add to the mixture, then stir well together, bake in a loaf one and one-half hour in a moderate oven. Frost when cold.



JAM CAKE.—Cream together one cupful sugar and one cupful butter, add three beaten eggs, three tablespoonfuls sour milk in which one teaspoonful soda has been dissolved, one-half teaspoonful each of ground cloves, ground cinnamon, ground allspice and grated nutmeg, one cupful any kind of jam and two cupfuls flour, to be baked in a loaf.

CREAM CAKE.—Beat two eggs in a teacup and fill the cup with sweet cream. Add one cupful sugar, one cupful flour, one teaspoonful baking powder (or one-half teaspoonful soda and one teaspoonful cream tarter). Flavor with lemon and bake in a moderately heated oven.

PEPPERMINT DROPS.—One pound sugar, one teacupful water, one teaspoonful essence of peppermint, a pinch of cream of tarter. Do not stir while boiling. Try in water and when hard enough to take shape, stir until it looks cloudy. Pour into buttered pans.

CHOCOLATE FUDGE.—Grate two squares unsweetened chocolate, and mix with it two and one-half cupfuls granulated sugar, one cupful milk, and one tablespoonful butter. Let boil hard for four minutes, beating all the time. Remove from the fire, add one teaspoonful vanilla and continue beating steadily until cool, smooth and thick enough to remain in shape. Pour out on a buttered plate and mark off into squares.

CREAM PUFFS.—Cream puffs are easily made, are nutritious, as they are principally egg, and make a pleasing dessert. In a saucepan put one-half cupful butter, add one cupful boiling water. When butter is melted add one cup flour while water is boiling. Stir until mixture forms in balls. When somewhat cool beat in four unbeaten eggs, one at a time, beating till thoroughly mixed between the addition of eggs. Drop mixture by spoonfuls in buttered pans at some distance apart. Bake thirty-five minutes. If removed from the oven before quite done they fall, but if returned to the oven they will rise all right. When cool, fill with sweet-

ened, whipped cream or a cream filling, using a funnel.

CHOCOLATE CRULLERS.—Two eggs beaten until they are creamy, and then beaten in one cupful of sugar, one tablespoonful melted butter, one-half teaspoonful each of salt and cinnamon, one square of melted chocolate. Mix well and then add one cupful sweet milk, three cupfuls flour sifted with two teaspoonfuls baking powder, roll out one-fourth inch thick on a floured board, then cut and cook to a golden brown in smoking hot fat. Dip in powdered sugar when they get cool.

CHERRY JELLY.—Select fine, ripe, sour cherries. Put them into a preserving kettle, and mash slightly to extract the juice; place them on the back of the stove to cook slowly, and let simmer for half an hour. When sufficiently cool, put them into a coarse muslin jelly bag (a small quantity at a time) and squeeze out all the juice, pressing hard. To two cupfuls of the juice allow one and one-half cupfuls of fine granulated sugar; bring the juice quickly to the boiling point, and boil very rapidly for twenty minutes. Then draw the kettle aside and add the sugar, which should be very hot, and stir steadily until it is all dissolved. Set over the fire again and boil briskly for one minute. If one-fourth part currant juice be added, the jelly will be firmer. This is delicious.

JELLIED STRAWBERRIES.—Boil slowly together for twenty minutes one quart of red currant juice and two pounds of granulated sugar; then drop in, one at a time, fine ripe strawberries; boil gently four minutes longer, then pour into jelly glasses. Let stand until the next day, then cover with a thin layer of melted paraffin, or note paper wet in white of egg, and tie over with thick paper. Keep in a cool, dry place.

SAUCE.—Beat one and one-third cupfuls of powdered sugar and one and one-half tablespoonfuls of butter to a cream; add one quart of ripe berries, a few at a time, and beat until well mixed.



CORNMEAL CAKE.—Mix together a pint of meal, a teacupful of sour cream, and the same quantity of fresh milk, half a cupful of molasses, one egg, a teaspoonful of carbonate of soda, half a teaspoonful of salt and as much cinnamon, nutmeg or other spice as may be required to flavor the cake.

FINE HERRING SALAD.—Take one dozen Hall herring, soak over night, next morning skin them, take all bones out and put the herring in milk for a few hours, then rinse with water, and cut in nice small squares. Sauce: One cupful vinegar, one-half cupful water and three large tablespoonfuls mixed mustard. Put milk of herring through colander, and mix with mustard and vinegar, then grate three large onions and add them with a little salt and pepper. Now pour the sauce over herring. Boil about six eggs hard, chop whites alone and yolks alone, and decorate the salad dish. A fine dish for "stag" parties.

GERMAN POTATOES.—Pare and slice thin enough potatoes to fill an earthen baking dish, sprinkle with salt, pepper and a little sage. Cover the top with very thin slices of pork and add enough rich milk to cover. Bake in a moderate oven two hours.

POTATO STEW.—Two cupfuls of mashed potatoes, an onion, four cupfuls boiling water, one celery stalk, one cupful milk, one teaspoonful butter, one tablespoonful flour, pepper and salt to taste. Cook the potato, onion and celery first, and after these are mashed, add the milk with flour and seasoning. A little rice or macaroni may be added if one likes.

POTATO ROLLS.—Pare, boil and pass through a colander seven large or twelve small potatoes, add one teaspoonful salt, one-half teaspoonful pepper, one-half cupful butter, the yolks of three eggs well beaten, one-half cupful of cream and four ounces grated cheese. Mix thoroughly and form into balls the size of an egg. Roll these on a well floured board into long ovals, brush with beaten egg and lay on a buttered

pan. Bake in a hot oven until golden brown, and serve hot. These are better than escalloped potatoes and easier to serve.

CORN CHOWDER.—One can of corn, one cupful of diced potatoes, one and one-half inch cube of fat salt pork, one tablespoonful of onion juice, four cupfuls of scalded milk, two tablespoonfuls of butter, one teaspoonful of salt and one salt-spoonful of pepper. Cut the pork into small bits and fry until nicely browned; add the onion juice, milk and potatoes, which have been boiled in salted water until tender; then add the corn, salt and pepper. Let all just come to the boiling point. Put a few oyster crackers in each plate and pour chowder over them. Tomatoes may be added if liked. Hot water may be added if too thick.

PICKLED SLICED TOMATOES AND ONIONS.—Wash and cut into slices one-half peck of green tomatoes and six large white onions. Put them into a preserving kettle, sprinkle over them one-half cupful of salt, and let stand for twenty-four hours; then drain them in a sieve. Return the vegetables to the kettle; add one-half ounce of ground pepper, two ounces of mustard-seed, one teaspoonful of ground cloves, two tablespoonfuls of celery-seed, one-half cupful of sugar, and sufficient vinegar to just cover all. Boil for five minutes, counting from the time the boiling begins, and keep the kettle covered.

A very large turkey will require to be cooked about three hours; one of ten pounds, two hours; a small one, an hour and a half.

A full grown fowl, an hour and a half; a moderate sized one, an hour and a quarter.

A pullet, from half an hour to forty minutes.

A goose, full grown, two hours.

A green goose, forty minutes.

A duck, full size, from an hour and a quarter to an hour and three-quarters.

A good cook is above price. She is the keystone to the family arch.



THE HOUSEHOLD



WHEN EASTER COMES.

"Thirty days hath September,"
Every person can remember;
But to know when Easter's come
Puzzles even scholars some.

When March the twenty-first is past,
Just watch the silvery moon,
And when you see it full and round,
Know Easter'll be here soon.

After the moon has reached its full
Then Easter will be here,
The very Sunday after,
In each and every year.

And if it hap on Sunday
The moon should reach its height,
The Sunday following this event
Will be the Easter bright.

HOW TO PREVENT FLANNELS FROM SHRINKING IN WASHING.

First. Soak them an hour or two in clear, cold water. Wring out and wash out in cold suds with the hands; washing on a board tends to shrink them. Rinse in cold water and blue. In cold weather put a very little hot water in the suds, to take the chill from the water, but never use hot water.

Second. Have ready two tubs of warm soapsuds (if very much soiled, have three), dust the flannel well, wash each piece separately through each tub by squeezing and turning—do not rub; then rinse in a tub of warm suds made very blue. Shake the flannel till cold, and hang out to dry. This process should be used with each piece before taking another. When flannels are dry, iron on wrong side.

Third. Use soft water, only as hot as the hands can bear it, use good soap freely (it should have little or no resin in it), cleanse the garments thoroughly and rinse in hot water, shake well, and hang up to dry.

An appropriate text for a Sunday morning sermon: "Many are called, but few get up."

RELIABLE HOUSEHOLD REMEDIES.

COLDS AND COUGH.—Solution of acetate of ammonia, two ounces; ipecacuanha wine, two drachms; antimony wine, two drachms; solution muriate of morphine, one-half drachm; treacle, four drachms; water, eight ounces. Take two tablespoonfuls three times a day.

BURNS AND SCALDS.—Four ounces powdered alum put into a pint of cold water. Apply rag dipped into this liquid to the burn or scald. Change frequently during the day.

WHOOPIING COUGH.—Olive oil, two ounces; oil of amber, one ounce; oil of cloves, one drachm. Mix thoroughly and rub on chest at bed time.

CURE FOR WARTS.—Pare off the thickened skin, cut it off by successive layers until you come to the surface of the skin and until blood appears; then rub the part with lunar caustic. If one application does not destroy the wart apply it again, or apply acetic acid.

TO KEEP WOUNDS FROM MORTIFYING.—Sprinkle sugar on them. The Turks wash flesh wounds with wine or sprinkle sugar on them. Obstinate ulcers may be cured with sugar dissolved in a strong decoction of walnut leaves.

AGUE.—Rhubarb, columba, and essence of peppermint, each one ounce; one pint of water; forty-five grains quinine. Take tablespoonful once an hour until it operates as a physic. Then same amount three times a day. To keep, add one gill of good whiskey.

FELON OR WHITLOW.—Soak the finger in a strong, warm lye of ashes for half an hour at a time four or five times daily, or make use of poultices in connection with lye.

AN EXCELLENT POULTICE FOR OLD SORES.—Scrape yellow carrots, wilt them on a pan or shovel, very soft. It will take out all inflammation, and is very healing.

KENTUCKY CIDER MILLS pay for themselves on any farm.



FOR THE HOUSEHOLD—Continued.



JEFFERSON'S TEN RULES.

Never put off until to-morrow what you can do to-day.

Never trouble another for what you can do yourself.

Never spend money before you have earned it.

Never buy what you don't want because it is cheap.

Pride costs more than hunger, thirst and cold.

We seldom repent of having eaten too little.

Nothing is troublesome that we do willingly.

How much pain the evils have cost us that have never happened!

Take things always by the smooth handle.

When angry, count ten before you speak; if very angry count a hundred.

SHAMPOO RECIPES.

The following recipes can be depended upon:

Olive oil.....	$\frac{1}{2}$ pint
Boiling water.....	1 pint
Borax.....	$\frac{1}{2}$ ounce

Shake well and apply when cold with sponge or flannel to the scalp.

Barbers use this shampoo mixture:

Carbonate of ammonia.....	$\frac{1}{2}$ ounce
Borax, powdered.....	1 ounce

Dissolve in one quart of soft water, then add a mixture of:

Glycerine.....	2 ounces
New England rum.....	2 quarts
Bay rum.....	1 quart

One-half of this formula may be put up at a time. Shampoo the scalp with a little of it and rinse several times.

A good shampoo liquid consists of:

Powdered borax.....	2 ounces
Boiling water.....	2 quarts
Powdered camphor.....	1 ounce

Mix. When cold, bottle for use. Rub into the scalp with the fingers several times a week.

FOR FALLING HAIR.

One of the best remedies for thin hair is homely and malodorous but inexpensive and unfailing—that of kerosene. It is claimed to grow hair on bald heads. A very little rubbed in the hair-roots every night will soon arrest falling hair and promote a new growth. Vaseline is good also. Only as much as the scalp will absorb should be used, so as not to grease the hair.

The oil of mace is a powerful hair invigorant. Half an ounce of it added to a pint of alcohol makes a good hair tonic.

The best way to use any tonic is to rub the scalp well, until in a glow. This prepares it for the reception of the stimulant.

A good tonic is made from:

Cologne.....	8 ounces
Tincture of cantharides.....	1 ounce
Oil of English lavender.....	$\frac{1}{2}$ dram
Oil of rosemary.....	$\frac{1}{2}$ dram

Apply to the hair-roots once or twice daily.

Where there is much scurf, the following will be found both a hair-grower and cleanser:

Alcohol.....	8 ounces
Bay rum.....	4 ounces
Tincture of green soap.....	1 ounce
Tincture of cantharides.....	1 ounce
Castor oil.....	1 ounce

Scent as preferred.

QUININE HAIR RENEWER.

Quinine sulphate.....	15 ounces
Borax.....	5 grains
Fluid extract jaborandi.....	1 drachm
Tincture of cantharides.....	2 drachms
Water of ammonia.....	2 drachms
Bay rum to make.....	6 ounces

Apply every other night.

DANDRUFF CURE.

Alcohol.....	2 ounces
Witch hazel.....	2 ounces
Resorcine.....	15 grains

This cleanses the scalp and makes the hair soft and silky. Apply every day until improvement is seen.



THE HOUSEHOLD—Continued.



MISCELLANEOUS HOUSEHOLD RECIPES.

TO MEND IRON POTS.—Take two parts of sulphur and one part, by weight, of fine black lead. Put the sulphur in an old pan; hold it over the fire until melted; then add the black lead, stir well until all is mixed and melted; then pour out on an iron plate or smooth stone. When cold, break into small pieces. If a crack, place sufficient quantity on and solder with a hot iron. If a hole, drive in a copper or iron rivet and solder it over with cement.

CEMENT FOR JOINING CHINA, GLASS, ETC.—Beat the whites of eggs well to a froth; let them settle; add grated or sliced cheese and quicklime. Work the compound up into a smooth paste; apply a little to the broken edges, and join them together. This cement will endure both fire and water.

CRACKS IN STOVES.—Cracks or joints in a stove may be readily closed in a moment with a composition consisting of wood ashes and a little common salt, made into a paste, and plastered over the crack. The effect is equally certain whether the stove be cold or hot.

HOW THE VITALITY OF SEED MAY BE TESTED.—Vitality of seeds may be tested by placing almost any of the larger seeds or grains on a hot pan or griddle. When the vitality is perfect the grain will pop or crack open with more or less noise. When the vitality is defective, or lost, it remains immovable in the vessel.

HOW TO PRESERVE EGGS.—To each pailful of water, add two pints of fresh slacked lime and one pint of common salt; mix well. Fill your barrel half full with this fluid, put your eggs down in it at any time after June, and they will keep two years if desired.

HOW TO KEEP FRESH MEAT IN SUMMER.—Farmers or others living at a distance from butchers can keep fresh meat very nicely for a week or two by putting it into sour milk or buttermilk, placing it in a cool cellar.

The bone or fat need not be removed. Rinse well when used.

HOW TO GET RID OF RATS.—Get a piece of lead pipe and use it as a funnel to introduce about one and one-half ounces of sulphide of potassium into any outside holes tenanted by rats, not to be used in dwelling. To get rid of mice use tartar emetic mingled with any favorite food; they will eat, sicken and take their leave.

TO REMOVE SCORCH STAINS.

For whitening scorched linen, it is often sufficient to wet it with soap-suds and lay it in the hot sun. Another method is, where milk is plentiful, to put one pound of white soap into a gallon of milk, and boil the scorched article in it. Another plan is, to squeeze out the juice of two middle-sized onions, which is boiled in half a pint of vinegar, with one ounce of white soap and two ounces of fuller's earth; the mixture is applied cool to the scorched part, and when dry wash off with clean water.

TO CLEAN HAIR BRUSHES.

A dessertspoonful of hartshorn to a quart of cold water, in a wash-hand basin. Dip in the hair of the brushes, and rub them together until clean. Then rinse well with cold water; rub dry with a towel, and stand upright at an open window.

TO CURE FRECKLES.

Take two ounces lemon juice, one-half drachm powdered borax, and one drachm sugar. Mix together, and let them stand in a glass bottle for a few days, then rub it on the hands and face occasionally.

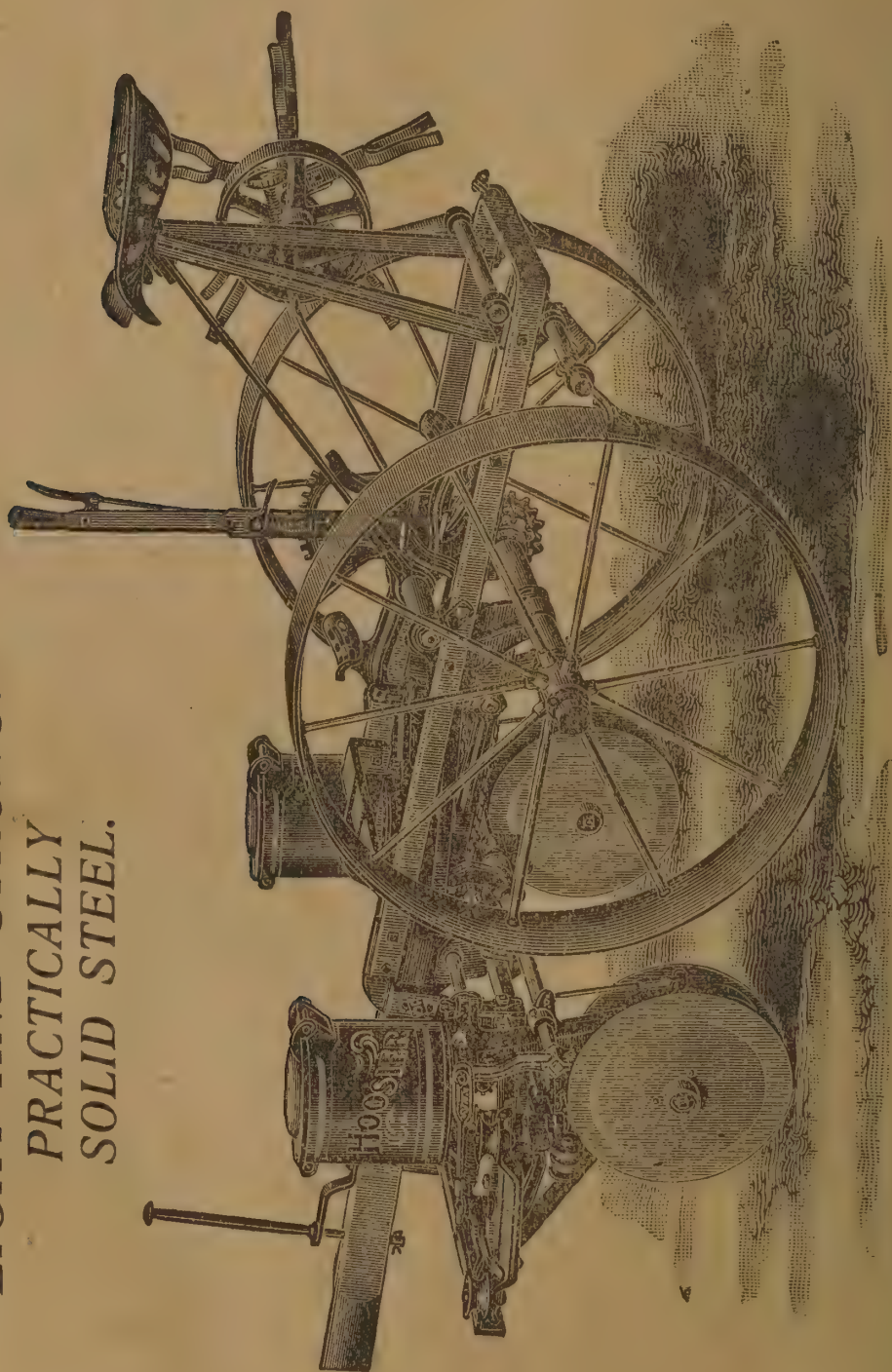
TO CLEAN SILVER ARTICLES.

Set fire to some wheat straw. Collect the ashes, and, after powdering it, sift it through muslin. Polish the silver plate with a little of it applied to some soft leather.

HOOSIER CORN DRILLS

Disk and Runner.

LIGHT AND STRONG.
PRACTICALLY
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*Well and Favorably Known
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HOOSIER DIVISION, American Seeding-Machine Co., Springfield, Ohio.



MISCELLANEOUS



LAME LOGIC.

A man often reaches an absurd conclusion after a great show of argument, because his reasoning is based on appearance and sound instead of fact and common sense. The sophist may be called a great reasoner and yet not have a grain of sense.

FOR GRAY HAIR.

For light-brown or auburn hair which is turning prematurely gray, the following has been used as a harmless coloring:

Take the hulls of the common black walnut when they begin to fall by the frost; put two quarts of cold water to one quart of the walnut hulls. Boil slowly until a rich, dark color. Cool, strain, and to one quart of juice add one-half ounce of alcohol. Bottle for use. The pillow-cases should be protected if used at night. This is simply a stain, but many claim that it has positively restored the original color.

BEWARE OF TATTLE, ENVY AND LITTLENESS.

In the refined and ever-refining home, education never stops. You create an atmosphere of refined thought and all within its range are ever absorbing of such thought, be they at table or in the parlor; and where there is generated an atmosphere of tattle, scandal, littleness, narrowness and envy, you absorb also of that contagion. It dims mind and diseases body.

TO CLEAN BLACK LACE.

Wash it in skimmed milk, do not rub, but constantly squeeze it softly. When it seems clean, put it into a little clean milk, also skimmed, and lay it directly on sheets of stout paper; touch it here and there to draw out the scallops; lay sheets of paper over the lace, and a heavy weight over all till dry. If laid on anything soft, the moisture is absorbed, and the lace will not be so new looking.



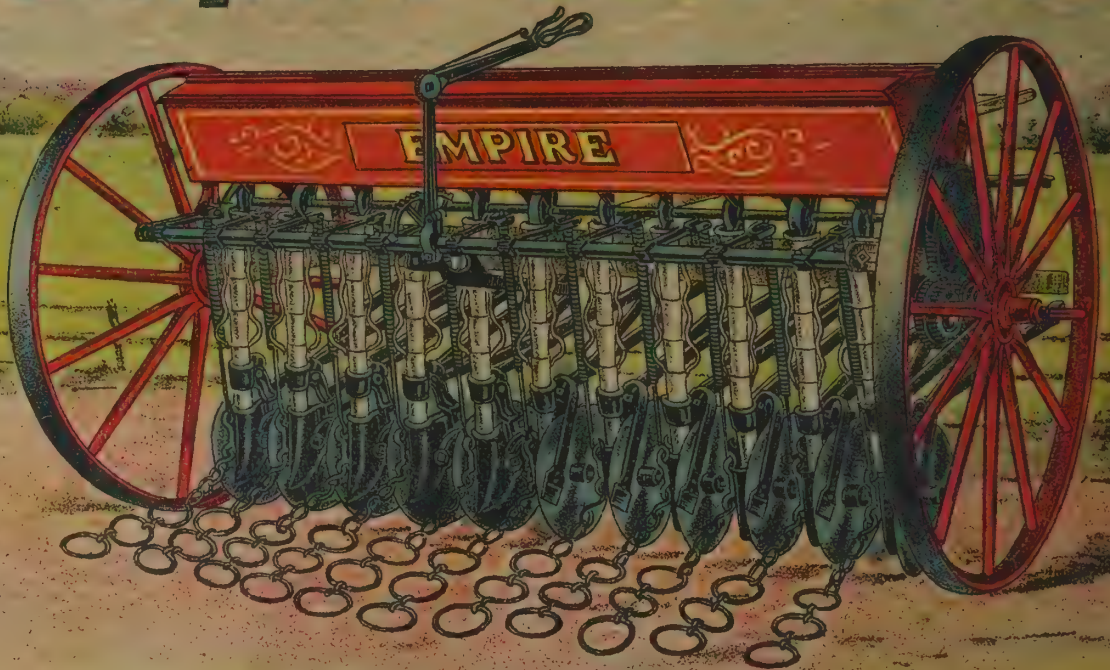
SUPERIOR 5-DISC DRILL

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AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

Empire Disc Drill



(See description on opposite page.)



Superior Fertilizer Hoe Drill

(See description on opposite page.)

EMPIRE DISC DRILL

(See Illustration on Opposite Page.)

Made in Both Grain and Fertilizer Styles, All Standard Sizes.

THE EMPIRE sows all kinds of grain and fertilizers in the most approved manner. It is equipped with the celebrated Empire Grain Feed—the feed that requires no change for any kind of grain. Fertilizer Drills have the Marks Fertilizer Force Feed. All Empire Drills have Chilled Bearings, Dust-proof Oil Cups and Steel Scrapers. Best quality heavy Wood ground Wheels are sent with all Empire Drills unless Steel Wheels are ordered. The Draw Bars for Discs are heavy and well braced. Angle of Discs set to line of travel, and therefore the Discs make a perfect Seed-Bed. Hinged Combination Lever—a great convenience to operator, whether riding or walking.

Made by Empire Division,

AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.

SUPERIOR FERTILIZER HOE DRILL

(See Illustration on Opposite Page.)

Made in All Standard Sizes, Both Plain and Fertilizer.

SUPERIOR Hoe Drills are strong, compact and neatly finished. Both Grain and Fertilizer Feeds are driven by our matchless Disk Wheel Device. Our improved Marks Feed will sow from 20 to 320 quarts per acre. On hillsides, level ground, hard soil, soft ground or stony land, the Superior Hoe Drills do excellent work.

Solid Steel Frame. Both Ground Wheels Drivers.

Pin Hoes. Spring Hoes.

Detachable Grass Seeder. Light Draft. Hoe Shifter.

Hoe Pressure. Perfect Double-Tree Hitch.

Four-Foot Ground Wheels with Three-Inch Tires.

Double Force Feed Grain Distributors.

Improved Marks Fertilizer Force Feed.

Made by Superior Division,

AMERICAN SEEDING-MACHINE CO.,
Springfield, Ohio.



FOR THE FARMER



THE SOIL AND ITS FERTILITY.

Every farmer realizes the importance of a productive soil. Agriculture must be carried on at a profit. Therefore it is essential to plant right, or in other words, to sow the seed in a properly-prepared seed-bed at the right time, at a uniform depth and in soil that contains the nutritive elements peculiar to the requirements of the crop to be grown.

ELEMENTS OF FERTILITY.

The whole universe is composed of 70 elementary substances, but only 13 of these enter into the growth and composition of plants, and are classed and known as the elements of plant growth. These 13 elements are properly divided into two classes: First, air derived; second, soil derived. Four of these, oxygen, carbon, hydrogen and a portion of nitrogen, are derived from the air. The other nine are potassium, phosphorus, magnesium, sulphur, calcium, carbon, silicon and iron. These elements, with the exception of three, can be eliminated, because all soils contain the others in sufficient quantities for the maximum growth of all crops. We cite one instance only: All plants require iron as a plant food, and all soils contain iron in abundance as an element of fertility. Nitrogen as ammonia, phosphorus

(which exists in the soil as phosphoric acid) and potash have been aptly termed the "tripod of agriculture."

Experience has demonstrated beyond a question of doubt, that *the growth of any plant is entirely governed by the least amount of any one of these elements contained in the soil.* Thus: If the soil contains only a small amount of nitrogen and an abundance of phosphoric acid and potash, the plant is governed in its growth by this small amount of nitrogen. The plant can use only a certain amount of phosphoric acid and potash, because it cannot get the nitrogen to go with it. The largest and best crops can grow only in a soil that contains in an available form all three of these essential elements.

EFFECT OF ESSENTIAL ELEMENTS.

The growth of foliage and stem is promoted by nitrogen. An excess of this element may check the development of the bloom and seed and cause the growth of leaves and stem.

The protein of plants is controlled somewhat by nitrogen, and where there is a lack of nitrogen the proportions of protein in seed or plant is less.

Phosphoric acid develops seed and fruits. It also hastens the ripening of plants. Large, plump kernels of

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Is branching out.

It now has a fine factory located at Brantford, Ont., where Grain Drills will be extensively manufactured. This new factory is thoroughly up-to-date, equipped with modern machinery and has skilled workmen in all departments.



FOR THE FARMER—Continued.



grain tell us that there is plenty of phosphoric acid in the soil, while small kernels denote a deficiency. Phosphoric acid and nitrogen are opposite in their effects. Nitrogen prolongs growth, phosphoric acid hastens maturity, potash gives color and develops the fleshy parts of fruit and the woody parts of the stem. When color is lacking in fruit, or when grain lodges badly, it is a certainty that the soil lacks potash.

PRACTICABILITY OF FERTILIZERS.

Every plant grown takes from the soil certain elements of fertility. If a crop is rotated year after year without giving back to the soil the essential elements of fertility taken from it, the soil naturally refuses to produce good crops.

It may be interesting to note that to grow an acre of wheat its growth takes from the soil 45 pounds of phosphoric acid, 133 pounds of ammonia and 58 pounds of potash. No soil can long stand this drain without a protest in the way of light crops of a poor quality.

THE WAY TO APPLY FERTILIZER.

The best way to apply any fertilizer is with a fertilizer drill. If the drill is the right kind—if it is made by the American Seeding-Machine Company—you will experience no difficulty. It will result in a saving of material,

because the fertilizer will be placed where it will do the most good. It will save time, because the grain and fertilizer will be sown at one operation. The seed-bed will be properly prepared for the reception of both seed and fertilizer. The grain will be sown at an even, uniform depth, properly covered, and the soil compacted in such a manner that it will retain its moisture and cause all the grain to germinate and come up at the same time. Broadcasting either grain or fertilizer is a waste of material, and the results are correspondingly bad.

ABOUT A DRILL, BUT NOT A GRAIN DRILL.

Years ago, when military competitive drills were a feature of many large Southern gatherings, a Nashville company—the pride of their city and the worship of Nashville femininity—went to St. Louis to take part in a contest participated in by the best drilled military companies in the South. Along with them went most of Nashville and among them Bates. Among those who could not go was Pauley—a sound and well-seasoned sport, intimate with Bates, and with unlimited confidence in his friend's judgment. Awards were to be made known on July 4th. Said Pauley to Bates, just before the train pulled out from Nashville: "As soon

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AMERICAN SEEDING MACHINE CO., KENTUCKY DIVISION, Springfield, Ohio
Succes-sors to Brennan & Co.,



FOR THE FARMER—Continued.



as you have sized the thing up, wire me how you think it will go." Pauley had \$1,000.00 he wanted to place on Nashville, but thought he might as well have his friend's advice, so long as there was time for it. The next day he received a telegram from Bates: "If we don't win it will snow in Nashville on the 4th of July." The drill came off. The decision was made in due time. Nashville was nowhere. Pauley, in his anguish, yet found time to wire Bates as follows: "Nashville, Tenn., July 4th. Snowing like hell."

HOW TO TREAT SEED WHEAT FOR SMUT.

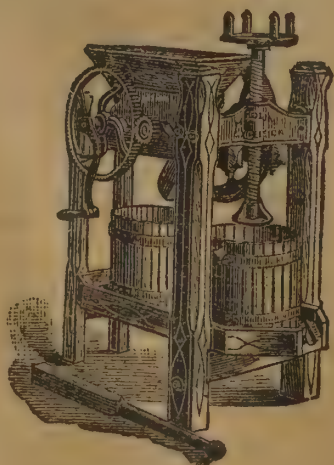
FORMALIN TREATMENT.—Take one pound or pint of formalin—the druggist may call it 40 per cent formaldehyde—and stir it into fifty gallons of water. This quantity will treat fifty or sixty bushels of wheat. If a smaller quantity is required less amounts may be used, by keeping the same proportions, which are practically an ounce of formalin to three gallons of water. The cost of formalin in small quantities is about five cents an ounce.

Sweep clean a place on the barn floor and sprinkle well with the formalin solution. Put the seed wheat on this sprinkled area and sprinkle or spray the wheat with the formalin

solution and shovel it over until every kernel is thoroughly wet. Do not be satisfied with simply dampening the grain, but apply the solution until every kernel is visibly coated with water. Allowing it to stand in a compact pile a couple of hours will insure the more complete action of the formalin. But if it is to be sown with a grain drill, a certain degree of caution, which every farmer will understand, must be exercised to dry it thoroughly so that it will not sprout and spoil nor be too wet to work well in the grain drill. In drying the grain and handling it afterward care should be taken to wet the floor, utensils, bags, etc., with formalin solution so as to kill every trace of the smut on the things with which the treated seed is to come in contact.

The above treatment is inexpensive and simple to apply. We have never heard of a case where it has failed to work.

HOT WATER TREATMENT.—The following treatment has been used for years, and if carefully applied is practically sure. It is, however, more cumbersome and laborious than the formalin method, though the expense of the material may be a little less: Soak the wheat for ten minutes in water at 133 degrees F. Use a tested thermometer only. Provide two vessels large enough to hold twenty gallons each, if possible. One should



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KENTUCKY DIVISION,
American Seeding-Machine Co.
SPRINGFIELD, OHIO.



contain warm water about 120 degrees F., the other scalding water at 133 degrees. Into the first vessel plunge the seed wheat in a burlap sack or wire basket. Keep it there until warm, then plunge into a second vessel, lifting it out occasionally and shifting it about in the scalding water until every kernel has been exposed to the temperature. Remove from the second vessel at the end of ten minutes, and cool immediately, either by spreading on a clean floor in a thin layer or plunging into a barrel of cold water. Dry and sow.

HOW TO PREVENT THE RAVAGES OF THE HESSIAN FLY.

A leading milling company sends out a circular to their customers containing the following remedies for this dreaded insect:

1. Fertilize with commercial fertilizer, sowing both grain and fertilizer at the same time with a fertilizer grain drill, so as to give the plant a quick, vigorous start. Then, if attacked, it will probably have enough vigor to outgrow the effects of the fly.
2. Sow rather late in the season, as the fly does not nest in late-sown wheat as in early sown. The fertilizer will push the wheat along if it is sown late.
3. Sow a decoy strip around the field early, and then before sowing the main crop plow this under and destroy thousands of the insects.
4. If wheat is to follow wheat, burn the stubble. This will destroy many insects.
5. Be careful in selecting seed wheat. Use only a vigorous-growing variety and grade it, so as to use only the large, well-developed grains for seed.

DIRECTIONS FOR PRUNING VINES.

Always cut upwards and in sloping direction, and leave an inch of blank wood beyond a terminal bud. Let the cut be on opposite side from the bud.

Prune so as to leave as few wounds as possible, and let the surface of every cut be perfectly smooth.

In cutting out an old branch, prune it even with the parent limb so that the wound may heal quickly.

Prune so as to obtain the quantity of fruit desired on the smallest number of shoots possible.

Never prune in frosty weather or when frost is expected.

Do not prune in the months of March, April or May, as pruning in these months causes bleeding.

Let the general autumnal pruning take place as soon after October 1st as the gathering of the fruit will permit.

Use a pruning knife of the best description, and if possible as sharp as a razor, if you wish the best results.

GOOD THINGS TO KNOW.

CHEAP PAINT FOR BARNs.—Take six pounds of melted pitch to one pint of linseed oil and one pound of yellow ochre, or brick dust.

CHEAP WHITE WASH.—Slack the lime as usual, except that the water used should be hot, and use plenty of salt. Then stir in enough sand to make it about as thick as cream. Coloring matter may be added to get the tint desired.

HOW GRAIN WILL SHRINK.—Farmers very rarely gain by keeping their grain after it is fit for market, when the shrinkage is taken into account. Wheat, from the time it is threshed, will shrink two quarts to the bushel or six per cent in six months, in the most favorable circumstances. Hence, it follows that ninety-four cents a bushel for wheat when first threshed in August, is as good, taking into account the shrinkage alone, as one dollar in the following February. Corn shrinks much more from the time it is first husked. One hundred bushels of ears, as they come from the field in November, will be reduced to not far from eighty. So that forty cents a bushel for corn in the ear, as it comes from the field, is as good as fifty cents in March, shrinkage only taken into account.

This estimate is taken on the basis of interest at seven per cent, and takes no account of loss by vermin.



VETERINARY RECIPES



BLEEDING.—In the roof of the mouth in the second wrinkle behind the front tooth; or if much blood is to be drawn, in the third wrinkle. In bleeding elsewhere professional advice is necessary.

BLISTER.—No. 1. A strong sweating blister for splints, spavins, ring-bone, etc. Biniodide of mercury, one drachm; lard, one ounce. After applying, wash with arnica water for several days. No. 2. Powdered cantharides, one part; lard, six parts.

COLIC.—Colic is the irritation of the coat of the small intestines, caused always by an active irritant interfering with the proper functions of the stomach and bowels. Symptoms are strong contraction of the intestines—the animal throws itself down, jerking its legs, trying to ease the pain; is then better for a while; another spasm comes on, all symptoms repeated. In flatulent colic, when the intestines are inflated with wind, the symptoms are similar. Purge well—give clysters of soapsuds; where much pain is evident, one and one-half ounces of opium. For the "Flatulent," give three drachms of carbonate of ammonia in a quart of cold water, and opium as above. Keep the animal well tied up and in a narrow stall.

CATTLE SWELLED WITH GREEN FOOD.—Instead of the usual method of stabbing them in the side, give a

close of train oil, which has proven very successful. The quantity of oil must be varied according to the age of the animal. About one pint for a grown-up beast is the usual quantity.

DIARRHŒA.—Diarrhœa is due to a derangement of the intestines from the presence of an irritant causing an increased secretion; may arise from sudden chills acting on the blood, wet grasses, bad food; is often the symptoms of other diseases. The best treatment is, when produced by an irritant, to remove it by giving purgative No. 2, under remedies below, or three or four ounces of castor oil. Nurse well and give warm bran mash. When due to sudden chills, give one-half an ounce of opium; injections of warm water and salts. When the evacuations are very offensive, give carbolic acid, one to twenty-five of water. A good astringent for diarrhœa, not to be given too soon, is powdered opium, one drachm; tincture of catechu, one-half ounce; chalk mixture, one pint; given as a drench.

DRENCH.—A good cooling drench, when horses are in too good condition is: Nitre, one ounce; tincture of digitalis, two drachms; sweet spirits of nitre, two ounces; whey, one pint.

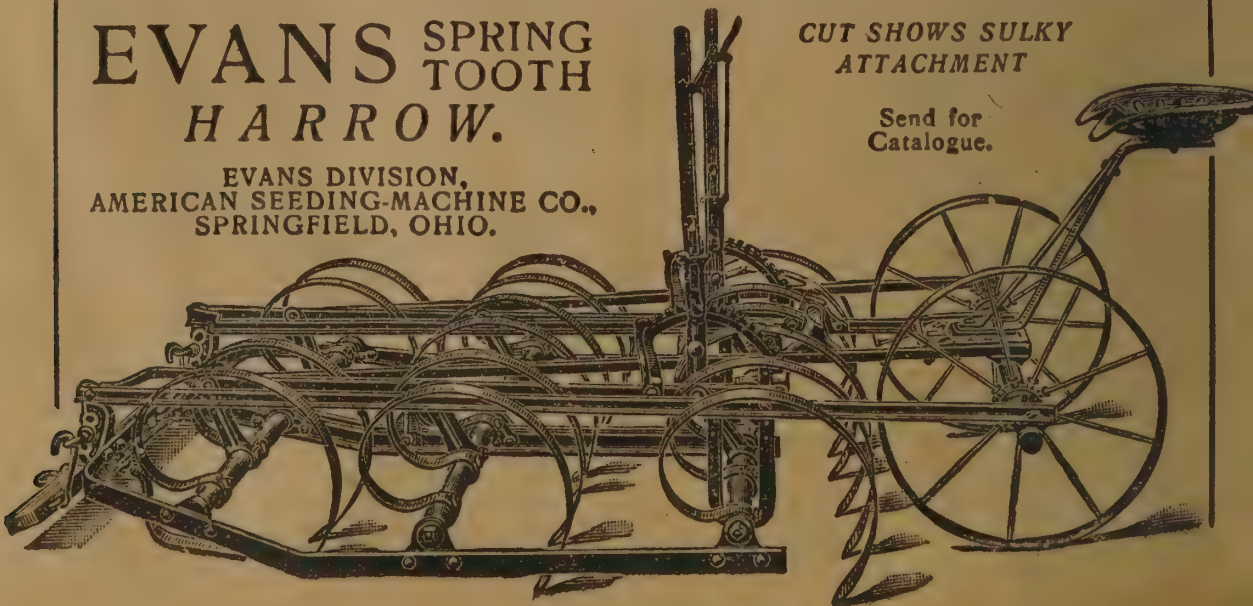
SPAVIN.—Spavin is a bony growth on the inner surface of the hock joint, giving a stiff motion to the hind leg,

EVANS SPRING TOOTH HARROW.

EVANS DIVISION,
AMERICAN SEEDING-MACHINE CO.,
SPRINGFIELD, OHIO.

CUT SHOWS SULKY
ATTACHMENT

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VETERINARY RECIPES—Continued.



and making the animal tread on its toe in trotting. Fire and blister early. (See Blister). If neglected, a spavin, though not materially injuring the animal's usefulness, will destroy his gait. Firing should never be practised except by an expert.

SPRAIN OF THE BACK TENDON.—Sprain of the back tendon just above the hoof, is a common form of lameness, attended with much heat and swelling. Cut the hair as closely as possible; then, should there be any danger of a blister touching the hoof, anoint the hoof with lard. Then rub in blister No. 2 with the hand thoroughly, leaving plenty on the surface. Tie the animal's head well up, or better still, put on a cradle. Do not bed with straw, as it will cause useless irritation to the animal, but put down sawdust, as the pain is apt to cause the animal to stamp his feet. After a week, rub a little neatsfoot oil over the place with a feather, to soften it.

WORMS 1.—Bots are the larvæ of a species of gad-fly, which find their way into the stomach of the horse while turned out to grass. They are from one-half to three-quarters of an inch in length, of a dark red color, somewhat pointed at their end. They attach themselves to the walls of the stomach, and when the time comes will pass away in the fæces. It has been positively ascertained that they do no harm whatever to the horse,

nor is there any remedy known to veterinarians which will remove them without injury to the animal.

WORMS 2.—Thread worms. A much smaller species of worm is found in the rectum. This pest, though not interfering with the condition of the animal as much as the former, causes much more uneasiness. The animal becomes very restless, stamping his hind legs, often throwing his heels above his head from the severe itching caused by the thread worm depositing its eggs, which it invariably does, on the delicate skin immediately outside the rectum. If the anus of a horse afflicted with thread worms be constantly well greased, these eggs will drop off when laid, and the supply of young worms thus being cut off, the disorder will cease. But it is more important to keep grease always applied to the anus, as otherwise the worms, which hatch out in a few hours, will find their way back into the rectum. In addition to this, a strong injection, made from boiling tobacco in water, alternated with linseed oil, will prove efficacious in allaying the irritation.

WORMS 3.—White worms are found in the small intestines. They are of a pale pink color, about six inches in length, shaped not unlike the earth worm. Symptoms: A hide-bound, stiff coat, large appetite and poor



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AMERICAN SEEDING MACHINE CO., KENTUCKY DIVISION, Successors to Brennan & Co. Springfield, O.



VETERINARY RECIPES—Continued.



condition. Considerable mucous is voided, and generally dries around the anus. Several worms pass with the faeces. Give a drachm of tartar emetic in a bran mash every night for a week and then administer a good purgative ball, to be followed by a pint of linseed oil. After which give a drachm of sulphate of iron mixed with the oats once a day for three days. Ordinary vermifuge as sold by veterinarians contain calomel and other preparations of mercury, and are apt to seriously injure the horse.

FOUNDER.—Founder, or Fever in the Feet, perhaps the most frequent cause of lameness, results from over-driving on hard roads, stones, pricks, or too bad shoeing. Also may arise from causes other than local—may be a symptom of a feverish condition of the system. The symptoms are great heat and tenderness of the feet, especially about the coronet, throbbing of the arteries, great lameness. The best treatment is systematic. Remove the shoes and give a mild laxative (No. 2), to be followed by febrifuges, such as nitre, one-half ounce; opium, one ounce, or ten drops of aconite; camphor, two or three drachms. Bleeding from the foot should be resorted to only in extreme cases.

SCRATCHES.—"Scratches" or "Chapped Heels" generally arise from allowing the feet to remain wet over night. The skin over the heel cracks and causes great pain. The best cure is prevention. Do not wash horse's legs, or if you do, wipe them dry. If noticed early, apply glycerine with a soft brush twice a day. Worse cases should at first be treated with mild astringents. Scratches, if neglected, are apt to turn into that troublesome disorder termed by horsemen "grease." A filthy discharge sets in from the heel. If this is neglected, a red fungoid growth sets in, emitting an unmistakable odor. Grease must be treated as scratches, viz: With glycerine and a weak solution of chloride of zinc, thirty grains to a pint of water, painted on. When the fungoid

growths appear they must be cut off and carbolic acid applied. Build up the system and keep your stables in better order.

GLANDERS.—Glanders, a fatal disease, arises from dirty stables, a specific poison, causing the formation of ulcers in the nose, with a great discharge, generally from the left nostril, and a lump firmly attached to the lower jaw. These symptoms appearing, immediately slaughter the animal. There is no cure, and the disease is very contagious, endangering even man.

LIVER DISEASES.—Liver diseases, shown by clayey and offensive evacuations, are often difficult to detect. The animal appears heavy, sleepy, feverish, poor appetite, tenderness on the off side. The treatment for diseases of the liver: Give one drachm of calomel; one drachm of opium, and linseed meal to form a ball, every night, with a pint of oil in the morning.

PURGATIVES.—No. 1. Mild. Barbadoes aloes, eight drachms; nux vomica, one drachm; carbonate of soda, one drachm, and ginger, three drachms; make it into a ball with honey soap. No. 2. Strong. Barbadoes aloes, three drachms; powdered rhubarb, two drachms; ginger, one drachm, and caraway oil, fifteen drops, made into a ball.

DOCTOR GREEN.

The greatest horse-doctor that the world ever knew was and is and ever will be Doctor Green. He is everywhere at the same time, though his presence is not recognized by thousands of owners of horses. In the dead of winter, though not so active in his visits, his medicine is always to be had. At the opening of spring he dons his finest clothing and traverses all countries until the frost robs it of its lustre; but still he dispenses with a generous hand. No doctor like him! Look at the grass and the weeds covering the acres about you, and you will then see this great doctor, well known to every ailing horse.



MISCELLANEOUS TABLES



QUANTITY OF SEEDS REQUIRED PER ACRE.

Wheat.....	1½ to 2 bushels	Beets.....	3 pounds
Rye.....	1½ bushels	Carrots.....	2 pounds
Oats.....	3 bushels	Rutabagas.....	¾ bushel
Barley.....	2 bushels	Millet.....	½ bushel
Peas.....	2 to 3 bushels	Clover, white.....	4 quarts
White Beans.....	1½ bushels	Clover, red.....	8 quarts
Buckwheat.....	½ bushel	Timothy.....	6 quarts
Corn, broadcast.....	4 bushels	Orchard Grass.....	2 bushels
Corn, in drills.....	2 to 3 bushels	Red Top.....	1 to 2 pecks
Corn, in hills.....	4 to 8 quarts	Blue Grass.....	2 bushels
Broom Corn.....	½ bushel	Mixed Lawn Grass.....	1 to 2 bushels
Potatoes.....	10 to 15 bushels	Tobacco.....	2 ounces
Castor Beans.....	3 quarts	Top Onion Sets.....	30 to 60 pounds
Hungarian Grass Seed.....	½ to ¾ bushel	Onion Seed.....	4 to 5 pounds
Flax Seed.....	¾ bushel	Turnip Seed.....	1 pound
Hemp Seed.....	44 to 100 pounds		

AVERAGE NUMBER OF SEEDS IN A BUSHEL.

Timothy, 41,823,360; Clover, 16,400,960; Rye, 888,390; Oats, 640,000; Wheat, 556,290.

CAPACITY OF WAGON BEDS—WIDTH 3 FEET.

Depth Inches	10 feet long		10 ft. 3 in.		10 ft. 6 in.		10 ft. 9 in.		11 ft. long		12 ft. long	
	Ear Corn	Shell Corn	Ear Corn	Shell Corn	Ear Corn	Shell Corn	Ear Corn	Shell Corn	Ear Corn	Shell Corn	Ear Corn	Shell Corn
12	13.3	24.1	13.7	24.7	14.0	25.3	14.3	25.9	13.7	26.5	16.0	28.9
13	14.4	26.1	14.8	26.8	15.2	27.4	15.5	28.1	15.9	28.7	17.3	31.3
14	15.6	28.1	15.9	28.8	16.3	29.5	16.7	30.2	17.1	30.9	18.7	33.7
15	16.7	30.1	17.1	30.9	17.5	31.6	17.9	32.4	18.3	33.1	20.0	36.2
16	17.8	32.1	18.2	32.9	18.7	33.7	19.1	34.6	19.6	35.4	21.3	38.6
17	18.9	34.2	19.4	35.0	19.8	35.9	20.3	36.7	20.8	37.6	22.7	41.0
18	20.0	36.2	20.5	37.1	21.0	38.0	21.5	38.9	22.0	39.8	24.0	43.4
19	21.1	38.2	21.6	39.4	22.2	40.1	22.7	41.0	23.2	42.0	25.3	45.8
20	22.2	40.2	22.8	41.2	23.3	42.2	23.9	43.2	24.4	44.2	26.7	48.2
21	23.3	42.2	23.9	43.2	24.5	44.3	25.1	45.4	25.7	46.4	29.8	50.6
22	24.4	44.2	25.1	45.3	25.7	46.4	26.3	47.5	26.9	48.6	29.3	53.0
23	25.6	46.2	26.2	47.4	26.8	48.5	27.5	49.7	28.1	50.8	30.7	55.4
24	26.7	48.2	27.3	49.4	28.0	50.6	28.7	51.8	29.3	53.0	32.0	57.9
25	27.8	50.2	27.5	51.5	29.2	52.7	29.9	54.0	30.6	55.2	33.3	60.3
26	28.9	52.2	29.6	53.5	30.3	54.8	31.1	56.1	31.8	57.5	34.7	62.7
27	30.0	54.2	30.8	55.6	31.5	57.0	32.3	58.3	33.0	59.7	36.0	65.1
28	31.1	56.2	31.9	57.7	32.7	59.1	33.4	60.5	34.2	61.9	37.3	67.5
29	32.2	58.2	33.0	59.7	33.8	61.2	34.6	62.6	35.4	64.1	38.7	69.9
30	33.3	60.3	34.2	61.8	35.0	63.3	35.8	64.8	36.7	66.3	40.0	72.3

EXPLANATION.—A wagon bed 10 feet 6 inches long, 27 inches deep, and of the standard width (3 feet), will hold 57 bushels of grain, and 31.5 (31½) bushels of ear corn. If the bed is 40 inches wide, increase the number found in table for corresponding length and depth, by ⅓ of itself; if 42 inches wide, by ⅔ of itself, etc.



MISCELLANEOUS TABLES—Continued.



CAPACITY OF CISTERNS, WELLS OR TANKS.

Number of barrels contained for each foot in depth.

SQUARE CISTERNS	BARRELS	CIRCULAR CISTERNS	BARRELS
5 feet by 5 feet holds.....	5.92	5 feet in diameter holds..	4.66
6 feet by 6 feet holds.....	8.54	6 feet in diameter holds..	8.54
7 feet by 7 feet holds.....	11.63	7 feet in diameter holds..	11.63
8 feet by 8 feet holds.....	15.19	8 feet in diameter holds..	15.19
9 feet by 9 feet holds.....	19.38	9 feet in diameter holds..	19.38
10 feet by 10 feet holds.....	23.74	10 feet in diameter holds..	23.74

AMOUNT OF BARBED WIRE AND STAPLES REQUIRED FOR FENCES.

LENGTH OF FENCE	1 LINE POUNDS	2 LINE POUNDS	3 LINE POUNDS	STAPLES
One rod.....	1	2	3	Medium size staples will run 70 to the pound and if the posts are placed one rod apart it will take one staple to each pound of wire. The medium size staples are usually the best for post oaks.
One hundred feet.....	6 $\frac{1}{16}$	12 $\frac{1}{8}$	18 $\frac{3}{8}$	
One hundred rods.....	100	200	300	
One side of square acre	12 $\frac{2}{3}$	25 $\frac{1}{3}$	38	
One side of half acre..	36	72	108	
One square acre.....	52 $\frac{2}{3}$	101 $\frac{1}{3}$	152	
One side of square mile	320	640	960	
One square mile.....	1280	2560	3840	

The above estimate number of pounds of barbed wire required to fence space or distances mentioned with one, two or three lines of wire, is based upon each pound of wire measuring one rod (16 $\frac{1}{2}$ feet).

CAPACITY OF CORN CRIBS—HEIGHT 10 FEET.

Length	$\frac{1}{2}$	1	12	14	16	20	22	24	28	32	36	48	64
Width													
6	13	27	320	373	480	533	587	640	747	853	900	1280	1707
6 $\frac{1}{4}$	13	28	333	389	500	556	611	667	778	889	1000	1333	1777
6 $\frac{1}{2}$	14	29	347	404	520	578	636	693	809	924	1040	1387	1849
6 $\frac{3}{4}$	15	30	360	420	540	600	660	720	840	960	1080	1440	1920
7	16	31	373	436	560	622	684	747	871	996	1120	1493	1991
7 $\frac{1}{4}$	16	32	387	451	580	644	709	773	902	1031	1160	1547	2062
7 $\frac{1}{2}$	17	33	400	467	600	667	733	800	933	1067	1200	1600	2133
7 $\frac{3}{4}$	17	34	413	482	620	689	758	827	964	1102	1240	1653	2204
8	18	36	427	498	640	711	782	853	996	1138	1280	1707	2276
8 $\frac{1}{2}$	19	38	453	529	680	756	831	907	1058	1209	1360	1813	2418
9	20	40	480	560	720	800	880	960	1120	1280	1440	1920	2560
10	22	44	533	622	800	889	978	1067	1244	1442	1600	2133	2844

The length is found in the top line, the width in the left hand column—the height being taken at TEN feet. Thus, a crib 24 feet long, 7 $\frac{1}{2}$ feet wide, and TEN feet high will hold 800 bushels of ear corn, reckoning 2 $\frac{1}{4}$ cubic feet to hold a bushel.

If not TEN feet high, multiply by the given height and cut off right hand figure. If above crib were only 7 feet high, it would hold (800 x 7)=5,600 bushels, etc.

The same space will hold 1 $\frac{1}{3}$ times as much grain as ear corn. Thus, a crib that holds 800 bushels of ear corn will hold (800 x 1 $\frac{1}{3}$)=1,440 bushels of grain.



MISCELLANEOUS TABLES—Continued.



WEIGHTS AND MEASURES.

WEIGHTS.

TROY.—24 grains (gr.) 1 penny-weight.....dwt.
20 dwt. 1 ounce.....oz.
3.2 grains, 1 carat, diamond wt.

APOTHECARIES.—20 grains..1 scruple
3 scruples.....1 drachm
8 drachms.....1 ounce
12 ounces.....1 pound

AVOIRDUPOIS.—16 drams (drs.) 1 ounce.....oz.
16 ounces 1 pound.....lb.
25 lbs. 1 quarter.....qr.
4 qrs. 100 weight.....cwt.
20 cwt. 1 ton.

5760 grains, Apothecaries or Troy wt., 1 lb.

7000 grains, Avoirdupois wt., 1 lb.
144 lbs. Avoirdupois equal 175 lbs. Apoth. or Troy.

LIQUIDS.—1 gal. oil weighs 9.32 lbs. Avoirdupois.
1 gal. distilled water..10 lbs.
1 gal. sea water...10.32 lbs.
1 gal. proof spirits..9.08 lbs.

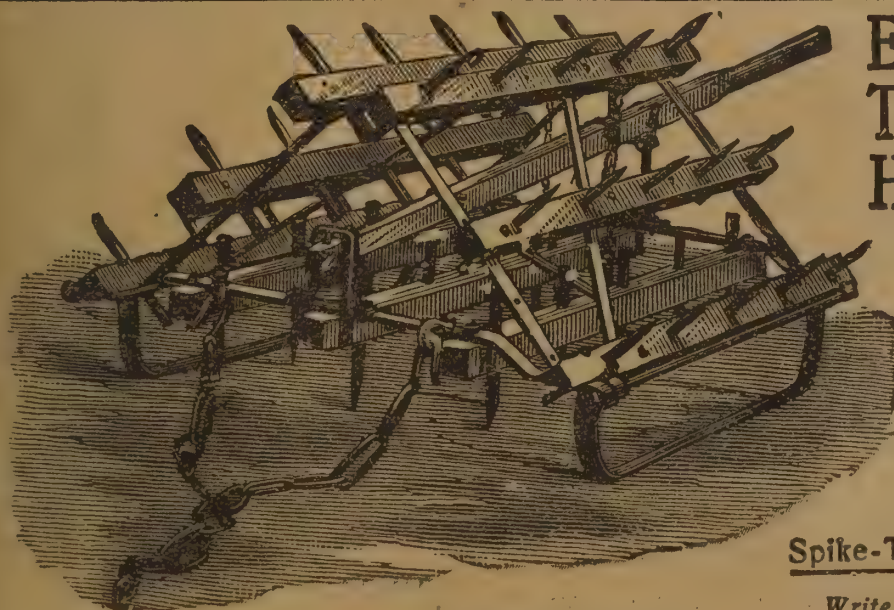
MEASURES.

LONG.—3 Barleycorns.....1 inch
12 inches.....1 foot
3 feet.....1 yard
5½ yards.....1 rod
40 rods.....1 furlong
8 furlongs.....1 mile

CLOTH.—2¼ inches.....1 nail
4 nails.....1 quarter
4 quarters.....1 yard

SQUARE.—144 square inches
.....1 square foot
9 sq. feet.....1 square yard
30¼ sq. yards....1 square rod
40 sq. rods.....1 rood
4 roods.....1 acre

14 lbs.....1 stone
22½ stones.....1 pig
8 pigs... 1 fether
200 lbs.....1 barrel
196 lbs. (flour).....1 barrel
100 lbs. (fish).....1 quintel



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AMERICAN SEEDING-MACHINE CO., SPRINGFIELD, OHIO.



The World's Calendar For Wheat Harvests.



JANUARY—Australasia, Chili, Argentina.

FEBRUARY — MARCH—East India, Upper Egypt.

APRIL—Lower Egypt, Asia Minor, Mexico.

MAY—Algeria, Central Asia, China, Japan, Texas.

JUNE—Turkey, Spain, Southern France, California, Tennessee, Virginia, Kentucky, Kansas, Utah, Missouri.

JULY—Roumania, Austro-Hungary, Southern Russia, Germany, Switzerland, France, Southern England, Oregon, Nebraska, Southern Minnesota, Wisconsin, Colorado, Washington, Iowa, Illinois, Indiana, Michigan, Ohio, New York, New England, Eastern Canada.

AUGUST—Holland, Belgium, Great

Britain, Denmark, Poland, Western Canada, the Dakotas.

SEPTEMBER, OCTOBER—Scotland, Sweden, Norway, North Russia.

NOVEMBER—Peru, South Africa.

DECEMBER—Burmah, Argentina.

From the above it will be seen that every month in the year the world has a wheat harvest somewhere, which should, to a large extent, silence the croakers who talk about the possibility of a wheat famine, taking the world as a whole. Nature, to the confusion of the speculator, has arranged a wheat calendar whereby during every month of the year, somewhere on the earth's surface, a crop of wheat is harvested. The machines manufactured by the American Seeding-Machine Company are in use somewhere in the world every day in the year.

PROSPEROUS FARMERS use the **SUPERIOR DISC DRILL**



Experience proves that Superior Disc Drills meet every requirement of perfect seeding. They are enthusiastically endorsed by the most prosperous farmers everywhere. They will not clog in trash and will successfully sow and cover grain wherever a disc harrow will run. From one-third to one-half more land can be seeded in a day than with any other drill. Never fail to sow the exact amount required of both grain and fertilizer. Light draft. No neckweight. Easy on both man and team. Equipped with every labor-saving device of merit. Strongly built of the best material. Write to-day for Free Catalogue. It tells all about them.

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Interchangeable Disk and Shoe Grain Drills, Cane Mills, Evaporator Pans, Cider Mills, Saw Mills, Gang Edgers, Straw Cutters, Corn Shellers.

EVANS

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AMERICAN SEEDING-MACHINE CO.,
SPRINGFIELD, OHIO.



MISCELLANEOUS—Continued.



KEEPING BOUQUETS FRESH A LONG TIME.

When you receive a bouquet, sprinkle it lightly with fresh water, then put it into a vessel containing some soapsuds; this will take the place of the roots, and keep the flowers bright as new. Take the bouquet out of the suds every morning, and lay it sideways, the stems entering first, in clear water; keep it there a minute or two, then take it out and sprinkle the flowers lightly by the hand with water; replace them in the soapsuds and they will bloom as fresh as when first gathered.

The soapsuds need changing every three or four days. By observing this rule, a bouquet can be kept bright and fresh for at least a month, and will last longer in a very passable state.

THE GAME OF THE TOURNA- MENT.

This is a game involving some bodily exercise and a little dexterity. It is played thus: A queen of beauty is appointed, whose authority is absolute, and whose decision in every part of the game is indisputable. A curtain-ring is suspended by a string, either from the ceiling, from some projection, or in any other way that may be convenient. The company, ladies as well as gentlemen, will be each provided with a lance; the lance being represented by a walking-stick, an umbrella, a poker, a hearth-broom, or anything that may be at hand. They will then run, one after the other, past the ring, carrying the lance in a horizontal position, or what is called *couched*. It should be carried on a level with the ring, and as each "knight" passes the latter she or he must, without changing the position of the lance, pass its point into the ring. This is called, in the language of chivalry, "riding at the ring." Should anyone miss the ring, or change the position of their lance in order to insert it, they are to be called on for a forfeit. If the queen

of beauty should tire of her regal dignity, and wish to share in the more active part of the game, she may, after each round has been passed, abdicate, when a successor can be appointed either by lot or by choice.



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"Perfection" Grass Seeder,
Improved Box and Roller Bearings.

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American Seeding Machine Company,
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A-B-C RHYMES



A

For "AMERICAN,"
Distinguished
For worth;
A name that is honored
All over
The earth.

B

Is for "BEANS,"
A nourishing food;
"Superior," "Empire,"
and "Favorite"
Plant them
In good.

C

Stands for "CORN,"
The pride of the
field;
Drop with an "Evans"
And get
A big yield.

D

Is for "DRILLS,"
In quality
Right;
They give satisfaction—
The farmer's
Delight.

E

Stands for "EMPIRE;"
You well know
The name.
It does its work proper
And enjoys
A great fame.

F

Is for "FAVORITE"—
"Farmers' Favorite"
We mean;
Drills grain to perfection,
This popular
Machine.

G

Stands for "GRAIN,"
All sizes
And kinds;
Our machines sow them
To suit
Cranky minds.

H

Is for "HOOSIER,"
A word
Widely known;
Seen oftenest on drills
Where wheat
Is most grown.

I

Stands for "IMPLEMENTS,"
For use
On the farm;
We make a great variety,
And they work
Just like a charm.

J

Is for "JUICE,"
As from apples it runs;
"Buckeye," "Champion,"
and "Kentucky"
Make the cider!
They're the ones.

K

For "KENTUCKY,"
The name
Of a drill;
Known by the old saying
"Good as wheat
In the mill."

L

Is for "LABOR,"
Severe
Spring and fall—
Not with *our* implements;
No, no,
Not at all.

M

Is for "MONEY,"
Which makes
The mare go.
Buy seeders and plant-
ers and sowers
At Springfield, O-hi-o.

N

Is for "NUMEROUS,"
By which,
Understand,
We count our shipments
Throughout
Every land.



A-B-C RHYMES—Continued



O For "ONTARIO,"
A province
Of renown;
We have a big factory
At Brantford
Town.

U Is for "USEFUL,"
A valuable
Point.
Our machines hang well
Together—never
Out of joint.

P Stands for "PLANTERS"
Called "Evans"
And "Hoosier."
See our agent or write us,
And then you will
Choose here.

V For "VARIETY,"
We'd have you
To know.
Not a seed nor a grain
But we are
Able to sow.

Q Is for "QUESTIONS,"
And many
You'll ask.
We answer all promptly
And deem it
No task.

W 'S for "WHEAT,"
A known
Staple crop;
Sow with our drills
And come out
On top.

R Stands for "RICE,"
And our drills
Sow it right.
There's no use of talking;
They are clear
Out of sight.

X Stands for "X-TRA,"
For quality
Otherwise. [is,
The best that all can say
They're 'way up
To the skies.

S For "SUPERIOR,"
A magical
Word.
This make is *superior*;
Enough
You have heard.

Y Is for "YOUTH,"
Little boys
If you please;
They work our machines
With comfort
And ease.

T Stands for "TRUTH,"
Which should
Ever be told:
All machines we offer you
Are worth
Their weight in gold.

Z Stands for "ZENITH."
It's above,
Not below. [er.
It's there we put the farm-
Signed: *American
Seeding-Machine Co.*

*It's the poorest kind of economy to under-
take to run a farm without new, up-to-date
machinery. It has been tried, but never wins.*